

**Radiologist, Dr B**  
**Radiology Service**

**A Report by the**  
**Health and Disability Commissioner**

**(Case 14HDC01066)**



Health and Disability Commissioner  
*Te Toihau Hauora, Hauātanga*



## Table of Contents

Executive summary.....	1
Complaint and investigation .....	2
Information gathered during investigation.....	3
Opinion: Dr B — Breach .....	12
Opinion: Radiology service — Adverse comment .....	15
Opinion: DHB1 — Other comment .....	16
Recommendations.....	17
Follow-up actions.....	18
Appendix A: Independent radiologist advice to the Commissioner .....	19
Appendix B: Independent physician advice to the Commissioner .....	24



## Executive summary

1. In 2013, on 10 Month1,<sup>1</sup> Mrs A presented to her general practitioner, Dr C, at a medical centre, with a 10-day history of severe pain in her lower back and hips. Dr C referred Mrs A for a lumbar spine (lower back) X-ray.
2. The X-ray was reported on by Dr B at a radiology service on 24 Month1. Dr B identified multilevel chronic disc degeneration,<sup>2</sup> but did not detect an L2<sup>3</sup> lytic lesion.<sup>4</sup>
3. At the time of the events, the radiology service was understaffed, and Dr B had an injury which slowed down the speed of his work. The radiology service attempted to arrange a work place assessment for Dr B, but, in the interim, his workload remained the same.
4. Mrs A continued to experience pain, and her mobility decreased. In Month6, Mrs A sought assistance from DHB1's Older People's Health Service, before then presenting to the Emergency Department at Hospital 1 on 6 Month8. Mrs A was discharged the same day with a referral to an occupational therapist (OT). The OT assessed Mrs A, and a number of mobility and home support aids were provided. On 27 Month8, Mrs A was seen by an anaesthetist, who prescribed opiates to Mrs A.
5. On 21 Month9, Mrs A was admitted to Hospital 1. An X-ray and magnetic resonance imaging undertaken on 31 Month9 identified an L2 lytic lesion, as well as significant spinal cord compression. Mrs A was transferred to Hospital 2 on 1 Month10, where she was diagnosed with multiple myeloma<sup>5</sup> and underwent spinal stabilisation surgery. Her recovery was difficult, and she was transferred back to Hospital 1 on 5 Month12.
6. Mrs A developed hospital-acquired pneumonia, and her condition began to deteriorate. She died a short time later.

## Findings

7. Dr B did not provide services to Mrs A with reasonable care and skill, as he failed to identify an L2 lytic lesion on Mrs A's X-ray of 24 Month1. Accordingly, he breached Right 4(1) of the Code of Health and Disability Services Consumers' Rights (the Code).<sup>6</sup>
8. Adverse comment is made that, at the time of these events, the radiology service was understaffed in that it did not have a sufficient number of radiologists working. Adverse comment is also made that, although the radiology service attempted to

<sup>1</sup> Relevant dates are referred to as Months 1-12 to protect privacy.

<sup>2</sup> A condition involving the gradual deterioration of the shock-absorbing intervertebral discs, at several places in the spine, which can cause severe chronic pain.

<sup>3</sup> The second vertebra on the lumbar spine.

<sup>4</sup> A light area in otherwise dense bone on an X-ray that suggests something has destroyed or replaced that part of the bone.

<sup>5</sup> Cancer of the plasma cells.

<sup>6</sup> Right 4(1) states: "Every consumer has the right to have services provided with reasonable care and skill."

arrange a work place assessment with regard to Dr B's injury, nothing more was done in the interim to ensure that Dr B could continue to carry out his work appropriately.

9. The care Mrs A received from DHB1 was appropriate in the circumstances.

### **Recommendations**

10. It was recommended that Dr B provide a written apology to Mr A, and have an independent radiologist peer perform a review of a random selection of his reports completed in the last 12 months.
11. It was recommended that the radiology service review the effectiveness of the changes it has made as a result of this case, and report back to HDC with the results of the review. This should include an update on the progress of the radiology service's plans to decrease interruptions to radiologists from technicians for advice, by reviewing its computed tomography (CT) and magnetic resonance imaging (MRI) protocols, and to reduce the time radiologists need to spend on vetting referral requests, by considering changing this to an electronic process.
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### **Complaint and investigation**

12. The Commissioner received a complaint from Mr A about the care provided by Dr B, the radiology service, and Hospital 1 (DHB1) to his late wife, Mrs A. The following issues were identified for investigation:

- *Whether radiologist Dr B provided Mrs A with an appropriate standard of care in 2013.*
- *Whether the radiology service provided Mrs A with an appropriate standard of care in 2013.*

13. The parties directly involved in the investigation were:

Mr A	Complainant
Dr B	Radiologist
Radiology service	Provider

Also mentioned in this report:

Dr C	General practitioner
Dr D	Consultant anaesthetist
Dr E	Internal medicine specialist
Dr F	Radiologist
Dr G	Consultant

14. Information was also reviewed from:

DHB1/Hospital 1

DHB2/Hospital 2  
 Medical centre  
 Accident Compensation Corporation  
 Coroner

15. Independent expert advice was obtained from radiologist Dr David Milne (**Appendix A**) and general physician and geriatrician Dr David Spriggs (**Appendix B**).

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## Information gathered during investigation

### Background

16. Mrs A (aged 68 years at the time of her death) had a complex medical history including atypical chest pain, diverticular disease,<sup>7</sup> bilateral protrusio acetabuli,<sup>8</sup> chronic musculoskeletal pain<sup>9</sup> that affected her back, pelvis and legs, osteoarthritis<sup>10</sup> in her knees, hypertension,<sup>11</sup> normochromic normocytic anaemia,<sup>12</sup> obesity, profound deafness and chronic leg swelling and ulceration.
17. From 2011, Mrs A suffered from decreased mobility and functional decline.

### Presentations 2011 to 2013

18. Between 2011 and 2013, Mrs A presented to her GP, Dr C,<sup>13</sup> at a medical centre, on several occasions with complaints of chest pain, hip pain and swollen legs. Her mobility had decreased.
19. In 2011, Mrs A was admitted to Hospital 1 for seven days with atypical chest pain, during which time she had an echocardiogram<sup>14</sup> and an upper gastrointestinal endoscopy,<sup>15</sup> which found an inconsequential gastric polyp.<sup>16</sup> One week later, she had

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<sup>7</sup> A condition where the lining of the colon bulges through defects in its muscle wall, creating multiple pouches (diverticula).

<sup>8</sup> A hip defect limiting range of motion and causing pain when performing certain activities. Also known as Otto's Disease.

<sup>9</sup> Pain that affects muscles, ligaments, tendons and bones.

<sup>10</sup> The most common form of arthritis causing cartilage breakdown in the joints. Also known as osteoarthritis.

<sup>11</sup> High blood pressure.

<sup>12</sup> A form of anaemia with normal amounts of haemoglobin within normal-sized red blood cells, but a low number of red blood cells.

<sup>13</sup> Dr C is vocationally registered in general practice.

<sup>14</sup> A test that creates ultrasound images of the heart.

<sup>15</sup> A procedure in which an endoscope (a long, flexible tube with a camera) is used to see the lining of the upper gastrointestinal tract.

<sup>16</sup> An abnormal growth of tissue.

a coronary angiogram,<sup>17</sup> which was essentially normal. A colonoscopy<sup>18</sup> two months later revealed extensive diverticular disease, but no tumours.

20. In 2013, on 10 Month1, Mrs A presented to Dr C with a 10-day history of severe pain in her lower back and hips. Dr C recorded in the clinical notes:

“Severe pain both hips and lower back for the last 10 days been taking paracetamol<sup>19</sup> regularly and then codeine<sup>20</sup> when its severe Doesn’t want to take codeine regularly as she gets bunged up [Objective]: [right] hip flexion 100[°] [internal] and [external] rotation 25[°] [straight-leg raise] 90[°] [left] hip flexion 60[°] [internal] and [external] rotation nil [straight-leg raise] 60[°].”

21. Dr C referred Mrs A for an X-ray of the lumbar spine (lower back), noting on the referral the reason for it as “increasing night pain over the last 6 months in [left] hip and lumbar spine”. The referral also included the clinical records above.

### **X-ray of 24 Month1**

22. Mrs A had the X-ray taken at the radiology service. The subsequent X-ray report, dated 24 Month1, completed by radiologist Dr B, identified multilevel chronic disc degeneration. The report states:

“Multilevel chronic disc degeneration with loss of disc height at all lumbar levels except at L3/4<sup>21</sup> which remains normal. Mild osteoarthritis of lumbar facet joints,<sup>22</sup> 3 mm retrolisthesis<sup>23</sup> L1 on L2 and L2 on L3. Anterolisthesis<sup>24</sup> 5 mm L4 on L5 and 8 mm anterolisthesis L5 on S1.

The pelvic ring, [sacroiliac] joints,<sup>25</sup> symphysis pubis<sup>26</sup> and both hip joints are normal.”

23. At that time, Dr B did not identify an L2 lytic lesion.<sup>27</sup> Dr B’s report was sent to Dr C, and no further action was taken at that time.

### **Older people’s health service and pain service**

24. In Month6, Mr and Mrs A sought advice from the medical centre regarding Mrs A’s decreasing mobility and cellulitis,<sup>28</sup> and Mrs A was referred to DHB1’s older people’s

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<sup>17</sup> A special type of X-ray to determine if the coronary arteries (arteries supplying blood to the heart) are blocked or narrowed.

<sup>18</sup> A procedure in which a colonoscope (a long, flexible tube with a camera) is used to see the lining of the large intestine.

<sup>19</sup> A painkiller for the relief of mild to moderate pain.

<sup>20</sup> An opioid pain medicine used to treat mild to moderate pain.

<sup>21</sup> The lumbar vertebrae (L1, L2, L3, L4 and L5) are the five vertebrae between the rib cage and the pelvis (beginning at the rib cage) and help support the weight of the body.

<sup>22</sup> Small stabilising joints located between and behind adjacent vertebrae.

<sup>23</sup> The backward slip of one vertebral body with respect to adjacent vertebrae.

<sup>24</sup> The forward slip of one vertebral body with respect to adjacent vertebrae.

<sup>25</sup> The joint between the sacrum (the bone just below the lumbar spine) and the ilium (the largest and uppermost bone in the pelvis) in the pelvis.

<sup>26</sup> The joint between the superior rami (the major part of the pubic bone) of the left and right pubic bones.

<sup>27</sup> Lytic lesions are light areas found in otherwise dense bone on an X-ray which suggest something has destroyed or replaced that part of bone.



health service. Mrs A was assessed by an occupational therapist, provided with a number of mobility and home support aids, and referred to DHB1's pain service. Before Mrs A was seen by the pain service, she presented to the Emergency Department (ED) at Hospital 1 on 6 Month8 with chronic pelvic pain.

25. Regarding this presentation, DHB1 told HDC:

“No other abnormalities were identified in the course of her [ED] assessment. The ED consultant who reviewed [Mrs A] believes he would have checked any recent referrals and evaluation by other services as well as her most recent X-ray results as part of his review of the patient.”

26. The clinical records for 6 Month8 state: “Improved and has slept, [Mrs A] will be discharged when partner able to pick her up, continue home medications, rest, gp recheck in 5–7 days and return in the meantime with worse pain, vomiting, bleeding, fever, or any other concern.” Mrs A was discharged that day. DHB1 stated:

“A referral was also made from our ED for a further OT [occupational therapist] assessment of [Mrs A's] home support needs to identify whether any additional supports could be provided. As a result of the above referral, [Mrs A] was seen on 11 [Month8] by the same OT as had assessed her previously. A number of additional [mobility and home support] aids and comfort cushions were tested and left with [Mr and Mrs A] for trial.”

27. On 27 Month8, Mrs A was seen at the DHB1 pain service by anaesthetist Dr D, who documented:

“She complains of pain in her back, across her buttocks, both knees, both groins and radiating down the front of both legs with numbness and pins and needles. Her leg jumps. She gets low back spasms. She has X-rays showing no arthritis in her hips but a suggestion of early arthritic changes in her knees and degenerative spinal disease.”

28. Dr D recorded an overall impression of a “[d]ifficult musculoskeletal problem in a lady who is almost chair bound now”. She prescribed opiates to Mrs A.

### **Admission to Hospital 1 on 21 Month9**

29. On 21 Month9, Mrs A contacted Dr C complaining of vaginal bleeding and being unable to leave the house as she could not lift her legs. Dr C advised her to call an ambulance to take her to the Emergency Department at Hospital 1.
30. Mrs A was admitted to Hospital 1 and found to have a urinary tract infection, chronic cellulitis in her lower legs, fluid overload, chronic pain in her back, hips and legs, anaemia and functional decline. She was placed under the care of internal medicine specialist Dr E, and then referred to the older people's health service.

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<sup>28</sup> Bacterial skin infection.

31. During the morning consultant ward round on 28 Month9, Dr E recommended blood tests, including a tumour marker screen and a serum protein electrophoresis test,<sup>29</sup> and ordered a chest X-ray, due to Mrs A's longstanding and unexplained anaemia. Mrs A's care was taken over by a geriatrician later that morning. The geriatrician carried out a physical examination and noted reduced reflexes in Mrs A's lower limbs, as well as reduced power and range of motion. He ordered the recommended blood tests, as well as an MRI (magnetic resonance imaging).

32. Mrs A underwent a lumbar spine X-ray and MRI at Hospital 1 on 31 Month9. The X-ray report states:

“Impression: Interval vertebral body osteolysis/collapse suggesting neoplasm. Possible L1 lesion. Infection is a diagnosis consideration.”

33. The MRI showed a large soft tissue mass with almost complete destruction of L2 and significant spinal cord compression.

### **Transfer to Hospital 2 on 1 Month10 and back to Hospital 1 on 5 Month12**

34. Mrs A was transferred to the Orthopaedics Service at Hospital 2 on 1 Month10, for treatment to stabilise her spine. She underwent further investigations and was diagnosed with multiple myeloma.<sup>30</sup>

35. On 7 Month10, Mrs A had spinal stabilisation surgery performed at Hospital 2. Her recovery was hindered by possible intraoperative myocardial infarction,<sup>31</sup> pneumonia,<sup>32</sup> acute renal failure, a gastric bleed, invasive pulmonary *Aspergillus fumigatus*,<sup>33</sup> and diarrhoea.

36. DHB1 told HDC: “The initial plan was to transfer [Mrs A] directly to a Spinal Unit for rehabilitation for her lower limb partial paralysis but in view of her ongoing medical complications, [Mrs A] was transferred back to [Hospital 1] on 5 [Month12].”

37. On 12 Month12, while at Hospital 1, Mrs A's condition began to worsen. DHB1 told HDC:

“[Mrs A's] respiratory function started to deteriorate on 12 [Month12] with a new diagnosis of hospital acquired pneumonia, on top of her pre-existing medical conditions. Medical staff were called to review her deteriorating condition a number of times over the course of that day. A new antibiotic regime was instigated based on expert advice from an external Infectious Diseases Specialist. [Mrs A's] condition did not improve over the day.”

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<sup>29</sup> A test to determine the levels of some types of proteins in blood, to identify patients with multiple myeloma and other serum protein disorders.

<sup>30</sup> A cancer of plasma cells that usually occurs in bone marrow.

<sup>31</sup> Commonly referred to as heart attack. It occurs when blood flow stops to a part of the heart, causing damage to the heart muscle.

<sup>32</sup> An inflammatory condition of the lung. Typical symptoms include a cough with phlegm, chest pain, fever, and trouble breathing.

<sup>33</sup> A lung infection caused by the fungus *Aspergillus*.

38. It is recorded in the clinical notes that Mrs A was transferred to the High Dependency Unit at 6.15pm on 12 Month12 “on [the] basis of [decreased] BP, [decreased] urine output, [and] difficulty getting accurate measures given [Mrs A’s] oedematous limbs”. Other problems identified at the time included shortness of breath, low albumin,<sup>34</sup> and likely emerging pulmonary oedema.<sup>35</sup>
39. Mrs A’s blood pressure, urinary output, and respiratory function proved difficult to stabilise over the next few days. Sadly, Mrs A died a few days later.
40. A post mortem confirmed the cause of death as acute pneumonia and multiple myeloma.

#### **Further information — Dr B**

41. Dr B became aware that an L2 lytic lesion was present on Mrs A’s X-ray of 24 Month1 after the complaint to HDC. He stated that he is “very disappointed and very much regrets overlooking the L2 lesion on [Mrs A’s] imaging [of 24 Month1]”. He stated: “With the perfect vision hindsight offers ... there is permeative destruction of the anterior cortex of L2.”
42. Dr B pointed out that there is a major error rate in radiology amongst competent practitioners, and said that the L2 lesion was subtle and easy to miss. He told HDC:

“This was especially easy to happen in a case such as this where there were numerous other obvious causes readily visible to explain the clinical symptoms of the patient. In this regard I refer to the multilevel degenerative disc disease, osteoarthritis of multiple facet joints and the two levels of spondylolisthesis<sup>36</sup> at L4/5 and L5/S1. Any one of these would be sufficient to explain the physical symptoms — all were noted in the report ... The presence of multiple causes for the clinical symptoms sets the environment for a ‘satisfaction of search’ scenario.”<sup>37</sup>

43. Dr B also stated that the radiology service was understaffed from 2011 and, at the time of these events, was operating under a “workforce shortage”, which required long hours of work at an increased pace. He told HDC that staff looked to him for assistance, and constantly interrupted his work, and that, when he returned from leave on 21 Month1, another colleague went on leave. However, Dr B also told HDC: “I believe that I did not rush through this case as evidenced by the time taken to record the various pathologies including taking time to measure the two listheses — something that would often be skipped by many.”
44. Dr B said there were also personal factors that may have impacted on his work in 2013 and, in addition, he suffered an injury that markedly slowed down his speed of work. In response to the provisional opinion, Dr B told HDC that as a result of his

<sup>34</sup> The most prevalent protein of the blood plasma.

<sup>35</sup> Fluid accumulation in the lungs, collected in air sacs, which makes it difficult to breathe.

<sup>36</sup> A condition in which the vertebrae slip out of place.

<sup>37</sup> A satisfaction of search scenario occurs when the reporting radiologist fails to continue to search for subsequent abnormalities after identifying an initial one. This initial detection of an abnormality satisfies the “search for meaning”, and the reporting of the case is ended prematurely.

injury and on his manager's recommendation he was referred to the Emergency Department. Dr B stated that an ACC claim was made, and that a course of physiotherapy was commenced with the full knowledge of his manager and colleagues. He noted that the injury would have been obvious during weekly radiology meetings. Dr B said that he notified his partners of this injury, but, despite repeated requests to accommodate the injury, no assistance was offered, and he was expected to continue with the same workload. Dr B said that he suffered an acute relapse, and that, following his return from leave in Month1, he again experienced an acute deterioration.

### **Further information and subsequent events —Radiology service**

45. In response to this investigation, the radiology service told HDC:

“All involved parties at the radiology service express their condolences to [Mr A] on the loss of his wife, and wish to note that whatever can be improved in our policies and procedures to avoid such an outcome for another afflicted patient in the future will be implemented as best as can be applied in our practice.”

46. The radiology service told HDC that “the abnormality in the L2 body shown in imaging performed on 24 [Month1] should have been identified, reported, and a recommendation made for further clinical assessment and imaging to establish the underlying diagnosis of this abnormality”. The radiology service also told HDC:

“The wedge-shaped lucent defect in the anterior L2 vertebral body was not noted at this time, in the background of sloping lines and shadows in the same area. Unfortunately, the advanced degenerative changes found at this time were considered, and could reasonably be considered, even in retrospect, to explain the ‘increasing night pain over the last 6 months’ and perhaps even the ‘severe pain in the hips and lower back for the last 10 days’ which required ‘paracetamol regularly and then codeine’. Still, all agree that, in retrospect, the abnormality in the L2 body should have been reported.”

47. The radiology service told HDC that there had been no concerns raised regarding Dr B's standard of practice during his time working for the radiology service, and that Dr B was known by his peers at the radiology service to be a competent radiologist.

48. The radiology service commissioned a systemic review by radiologist Dr F, which included the review of six different cases, including the care provided to Mrs A. Only Mrs A's case directly concerned Dr B's reporting. With regard to the care that Dr B provided to Mrs A, Dr F stated:

“A lytic lesion of this size should have been seen and commented on, especially with a history of 10 days of severe lower back pain, as the reported degenerative changes appear chronic and would not give a reasonable explanation for the acute severe back pain (however, back pain is a very common clinical presentation and the degree of degeneration seen on X-ray does not always correlate with the severity of experienced pain/discomfort).”

This report is regarded as incomplete, missing the lytic lesion in L2, and it is a deviation from expected reporting standard. Further imaging with [computed tomography] or MRI should have been suggested.”

49. Dr F identified: “Other likely contributing factors are related to the clinical care between the X-rays (24 [Month1] to 31 [Month9]) where opportunities to review the first X-ray, order another X-ray or order more advanced imaging like MRI or CT, especially in light of deteriorating clinical symptoms with new, progressive neurology, were missed.”

50. The radiology service told HDC that, in Month1, “professional staffing levels were under significant duress, relative to the workload required”. Dr F noted that, on 24 Month1, there were three radiologists sharing the workload. He stated in his report:<sup>38</sup>

“Three radiologists managing the workload of the entire department including a clinical meeting is considered to likely create an unsafe environment with high individual workload under time pressure which may result in a lack of time to apply the appropriate accuracy in reporting.”

51. In response to the provisional opinion, Dr B submitted that the actual number of radiologists required that day was “at least eight”. He stated that, during his time at the radiology service, there was a massive change in workload, with no resulting change in staff. Dr F noted that, at the time of the review, successful recruitment had taken place, and eight radiologists were employed and a tele-radiology company was contracted to cover urgent overnight cases. Dr F recommended adjustment of staff levels to meet demand, increased flexibility in rostering, and robust contingency planning.

52. In response to recommendations made by Dr F, the radiology service has adjusted staffing levels so that there are now 10 radiologists on the roster, with ongoing monitoring of whether this is sufficient to meet the workload demand. The radiology service has also put in place a contract with an external credentialled radiologist agency to provide remote reporting for out-of-hours imaging or for any other time that a resource/workload mismatch arises. Further, planned leave has been limited to two radiologists at any one time, and the radiology service is more flexible with the use of non-clinical time and time for continuing medical education. The radiology service now recruits successive locums and ensures that internal job sizing is undertaken at appropriate intervals. It has also appointed a long-term locum radiologist.

53. Dr F identified that interruptions were a frequent problem, causing “a loss of concentration and disruption in the train of thought”. Dr F considered that this was a contributing factor in Mrs A’s case. The radiology service has since made changes to reduce interruptions to radiologists, in light of Dr F’s review. It has created protected times during the morning and afternoon, where interruption is not tolerated unless absolutely critical (urgent clinical matters are always responded to). The radiology service is also reviewing its standardisation protocols for CT and MRI to decrease

<sup>38</sup> Dr F made this statement with regard to one of the other cases he reviewed. However, the events in that case also occurred around the same time.

interruptions by technicians for advice on these procedures. Further, it plans to consider changing the process of vetting of referral requests from manual to electronic, to reduce the time radiologists have to spend on this.

54. The radiology service has formalised departmental guidelines regarding reporting of incidental lesions. Further, it told HDC:

“The system-wide presentation and discussion of this case at the Multimodality and Morbidity Mortality and Improvement conference raised the awareness of clinicians and consultants from many areas of specialty to continually question whether a patient’s presentation and clinical course are consistent with and supported by the clinical, laboratory and imaging findings. We, at [the radiology service], also seek to engage more fully with clinical staff in assisting them in the management of especially complex patients, such as [Mrs A]. Our regular radiology meetings with the various [DHB1] clinical departments can provide this forum, as can our readiness to consult informally with our clinical colleagues.”

55. With regard to Dr B’s injury, DHB1 told HDC that an issue with a radiology work station was raised at an the radiology service senior management meeting, and that emails following the meeting suggested this was in relation to Dr B “having some issues ...”. DHB1 noted that a request was made for an occupational health nurse to conduct a workplace assessment, but that because of leave arrangements of both the occupational health nurse and Dr B, this was not able to be arranged until after 23 Month1. DHB1 noted that the assessment was no longer required as Dr B resigned. DHB1 stated: “[T]here is no other documentation such as an incident report that records that [Dr B] had [an ...] injury.”

#### **Further information — Mr A**

56. Mr A was concerned that Mrs A’s L2 lytic lesion was not identified earlier, despite the fact that it can be seen on the X-ray of 24 Month1.
57. Mr A also expressed concern that Mrs A’s pain was not adequately investigated or managed during the last three to four years of her life. He stated that she presented to the Emergency Department, but was sent home instead of having her pain investigated, and that her referral to the pain service was of no effect. Mr A told HDC that Mrs A’s quality of life was poor, and he struggled to support her at home, but nobody seemed able to help. He stated that, when she was admitted to Hospital 1 on 21 Month9, minimal investigations were carried out until another X-ray of her lumbar spine was performed on 31 Month9.
58. Mr A also raised other concerns about Mrs A’s 21 Month9 admission to Hospital 1, including his having to supply her chair from home so that she could be comfortable, the attitude and manner of nursing staff, and bruising Mrs A suffered from the use of a hoisting belt.
59. Lastly, Mr A complained about the care Mrs A received after she was transferred back to Hospital 1 from Hospital 2. He told HDC that the temperature of her room was too cold, and that she was supposed to be under 24-hour surveillance, but this did not happen. Mr A also said that, on 12 Month12, a nurse struggled to take Mrs A’s blood



pressure reading on a new machine, and thus delayed medical review or transfer to the intensive care unit.

### **Further information — DHB1**

60. DHB1 offered the following apology to Mr A:

“We are very sorry for any and all of our actions that might have contributed to the delayed diagnosis of [Mrs A’s] multiple myeloma or that compounded the tragedy of the situation that [Mr and Mrs A] faced as a result of this delayed diagnosis. We offer our deepest sympathies for [Mr A’s] loss.”

61. Regarding Mrs A’s care, DHB1 told HDC:

“[The] misreported X-ray subsequently influenced the assessment of [Mrs A’s] ongoing pain and declining level of function at home when she made contact with various health professionals for help with her problems including her GP, [Hospital 1] ED consultant, [Hospital 1] Chronic Pain Specialist, [Hospital 1] Physician and DHB1 allied health staff. ... [T]he various clinicians with whom [Mrs A] came into contact believed her degenerative spinal changes, the arthritis in her knees and her pre-existing Otto’s disease of her hips were a reasonable explanation for [Mrs A’s] declining level of function and chronic pain. The focus as a result was on trying to maximise [Mrs A’s] independence with mobility aids, home support aids and better pain management.”

62. DHB1 stated that, in summary, the misreported spinal X-ray from Month1 misled its clinicians into thinking that there were degenerative changes and/or pre-existing conditions “that provided a reasonable explanation for the signs and symptoms that [Mrs A] was experiencing during her various contacts with [DHB1]”.

63. DHB1 also told HDC that all of the clinicians involved in Mrs A’s care are aware of her late diagnosis of multiple myeloma and the tragic impact this had on her longevity. They have all been asked to reflect, with the benefit of hindsight, on the comprehensiveness and effectiveness of their assessment of Mrs A’s presenting symptoms. DHB1 stated: “In this way, learnings can be taken from this case to benefit future patients who might present in a similar fashion that might mask the true nature of an underlying clinical problem.”

64. Regarding Mr A’s concerns about the attitude and manner of nursing staff during Mrs A’s 21 Month9 admission to Hospital 1, DHB1 apologised for any comments construed as negative, and explained that staff were trying to encourage Mrs A with her rehabilitation. In relation to her bruising, DHB1 told HDC: “The presence of the bruising [Mr A] has described is more likely the result of a coagulation problem secondary to [Mrs A’s] myeloma rather than rough staff handling.”

65. DHB1 explained that when Mrs A returned from Hospital 2 on 5 Month12, she was placed in a single room in isolation owing to her having contagious diarrhoea. DHB1 advised that the nurse manager of Mrs A’s ward at Hospital 1 was not aware that Mrs A’s room was too cold. DHB1 acknowledged that it has had some difficulties balancing its air conditioning system to achieve a temperature suitable for all patients,

and that, on occasions, the diffuser for the air conditioning system vent has not been correctly adjusted. However, it advised that it was not aware of a problem in Mrs A's room.

66. DHB1 told HDC that Mrs A was not placed under 24-hour clinical surveillance until she was transferred to the High Dependency Unit on 12 Month12, and that she was reviewed by the medical team several times over the course of that day, owing to the concerns of nursing staff. It also explained that, as the nurse had difficulty obtaining Mrs A's blood pressure from the electronic monitor, she reverted to a manual monitor to obtain a reading.

### **Responses to provisional opinion**

67. Mr A responded to the "information gathered" section of the provisional opinion. He had no comments to make, but provided a letter from a family friend, supporting his concerns about Mrs A's care.
68. DHB1 and the radiology service confirmed that neither had any comments to make in response to the provisional opinion.
69. Dr B responded to the provisional opinion and made the following submissions:
- Dr B disputed that the first time the radiology service was aware of his injury was two months prior to Mrs A's admission, and stated that his manager was aware of his injury as early as five months prior to her admission.
  - Dr B submitted that, at the time of his reporting on Mrs A's imaging, he was subject to interruptions, work pressure, and concurrent personal factors "at the extreme end of the scale". He also stated that he was asked to work in a situation of critical under resourcing. He submitted that the level of understaffing did not represent usual work place stressors.
  - Dr B undertook to comply with my recommendation to make an apology to Mr A.
  - Dr B did not accept that there is a basis for the proposed recommendation that he have a peer radiologist review a random selection of his reports completed in the past 12 months, because the reviews already undertaken have not raised concern about a pattern of poor reporting or competence issues.
70. Dr B made further comments, which have been incorporated into this report.

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### **Opinion: Dr B — Breach**

71. Under Right 4(1) of the Code, Mrs A had the right to have services provided with reasonable care and skill by the staff involved in her care.
72. Mrs A had a complex medical history which included hip pain. Her GP referred her for an X-ray of the lumbar spine for "increasing night pain over the last 6 months in [left] hip and lumbar spine". The GP's referral included a copy of the clinical notes from the 10 Month1 consultation.



73. Dr B was the radiologist who reported on Mrs A's X-ray, which was undertaken on 24 Month1 at the radiology service. The radiology service told HDC that during the time Dr B worked at the radiology service, he was known by his peers to be a competent radiologist. While Dr B identified multilevel chronic disc degeneration in his radiology report, he failed to identify an L2 lytic lesion or recommend further investigation.
74. My expert advisor, radiologist Dr David Milne, conducted a review of the X-ray of 24 Month1,<sup>39</sup> and his report stated that there was "bone destruction involving the anterior aspect of [the] L2 vertebral body ... in keeping with metastatic malignancy, for which further investigation was indicated".
75. After reviewing Dr Milne's report, Dr B stated: "With the perfect vision hindsight offers ... there is permeative destruction of the anterior cortex of L2."
76. At the time of these events, Dr B worked for the radiology service. The radiology service considered that the abnormality in the L2 body shown in the imaging should have been identified and reported, and a recommendation made for further clinical assessment and imaging to establish the underlying diagnosis of the abnormality. However, the radiology service also told HDC that the advanced degenerative changes found could reasonably be considered to explain Mrs A's increasing night pain and perhaps the severe pain in her hips over the previous 10 days, for which she had required paracetamol and codeine.
77. Mrs A was subsequently diagnosed with multiple myeloma after an X-ray and magnetic resonance imaging undertaken on 31 Month9 identified an L2 lytic lesion, as well as significant spinal cord compression. Mrs A was transferred to Hospital 2 and underwent spinal stabilisation surgery.
78. After reviewing further documentation related to this complaint, Dr Milne advised:
- "[T]he accepted standard of care in this case would be that the destruction of the anterior aspect of L2 would be mentioned in the reporting of these images, that this observation would be highlighted as the major finding on the examination and that further clinical assessment and imaging would be required to establish the underlying diagnosis of this abnormality."
79. In his report on Mrs A's imaging, Dr Milne also noted possible bone destruction in L5 and the right ala of the sacrum. However, he told HDC that his peer radiologists were not initially suspicious of a lesion involving the right ala of the sacrum, and some considered this to be likely bowel gas. Despite this, Dr Milne stated: "There would be no potential downside to over calling observations in this case, only to under calling as occurred."
80. Dr Milne considered that the care provided to Mrs A by Dr B was a departure from the accepted standard of care. Dr Milne stated: "I do not ... believe that this error of

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<sup>39</sup> Initially, Dr Milne was not provided with any information about Mrs A's care, other than the X-ray and referral information.

observation on behalf of [Dr B] falls within the accepted range of reporting standards expected by radiologists practising in New Zealand.” I accept Dr Milne’s advice.

81. Dr Milne also noted Dr B’s explanation that the observed degenerative disc and facet joint disease fulfilled his requirement of a “satisfaction of search” scenario. Dr Milne advised that the symptoms mentioned in the referral for imaging included “increasing night pain”, and this is a concern for malignant bone disease rather than the radiculopathy<sup>40</sup> symptoms more typically associated with degenerative disc and facet joint disease.
82. Dr B told HDC that, at the time of these events, the radiology service was understaffed, which required him to work long hours at an increased pace, and that he was often interrupted by staff seeking assistance. He also noted that there were personal factors that may have impacted on his work, and that he had suffered an injury that markedly slowed down his speed of work.
83. Dr Milne considered that the factors set out by Dr B may well have had an impact on his work. However, Dr Milne advised:

“It is misleading to accept that a Radiologist overlooking a significant observation is within the accepted standard of care. It happens but it is not acceptable ... Work place related stressors are a constant issue in Medicine and clearly affect the performance of a Doctor. While systemic issues of infrastructure and culture can be taken into account, the responsibility of any Doctor is to discharge their obligations with the patient’s best interests at heart.”

84. In response to the provisional opinion, Dr B submitted that the workplace factors he was subject to were “at the extreme end of the scale”. He stated that he was asked to work in a situation of critical under resourcing, and submitted that the level of understaffing did not represent usual work place stressors. I note that Dr F stated in his review that the level of understaffing was considered likely to create an unsafe environment with high individual workload under time pressure, “which may result in a lack of time to apply the appropriate accuracy in reporting”. I note that Dr B advised that he believes that he did not rush through this case.

### **Conclusion**

85. In his radiology report of 24 Month1, Dr B failed to identify the destruction of the anterior aspect of the L2 vertebral body. Despite the workplace circumstances that existed at the time, I remain of the view that this feature should have been identified and reported on. By failing to do this, Dr B did not provide services to Mrs A with reasonable care and skill and, therefore, breached Right 4(1) of the Code.

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<sup>40</sup> A set of conditions in which one or more nerves are affected and do not work properly.

## Opinion: Radiology service — Adverse comment

86. Radiology clinics have a responsibility for ensuring that consumers receive an appropriate standard of care. Accordingly, clinics need to have in place adequate systems and procedures to support staff.
87. The radiology service told HDC that, in Month1, “professional staffing levels were under significant duress, relative to the workload required”. Dr B told HDC that, at the time of these events, the radiology service was understaffed, which required him to work long hours at an increased pace, and that he was often interrupted by staff seeking assistance.
88. Dr B also noted that there were personal factors that may have impacted on his work, and that he had suffered an injury that markedly slowed down his speed of work. Dr B said that he notified his partners of this injury, but despite repeated requests to accommodate the injury, no assistance was offered and he was expected to continue at the same workload.
89. In this respect, DHB1 noted that a request had been made for an occupational health nurse to conduct a workplace assessment, but that because of leave arrangements of the occupational health nurse and Dr B, this was not able to be arranged until after 23 Month1. Shortly afterward, Dr B resigned.
90. I note that Dr F stated in his review that the level of understaffing was considered likely to create an unsafe environment with high individual workload under time pressure, “which may result in a lack of time to apply the appropriate accuracy in reporting”.
91. I am critical that, at the time of these events, there were workplace stressors at the radiology service that Dr B felt impacted on his work. I acknowledge that the radiology service attempted to arrange a workplace assessment for Dr B with regard to his injury. However, I am concerned that in the interim nothing further was done to ensure that Dr B could continue to carry out his work appropriately, in light of his injury. It is also concerning that the radiology service was understaffed, and that this placed pressure on the staff at the radiology service who had to manage the workload.
92. Despite the above criticisms of the radiology service, I am satisfied that Dr B’s failure to identify the L2 lytic lesion was his error alone, especially given that, as he advised, he did not rush when reviewing the X-ray of 24 Month1.
93. The radiology service has since made a number of changes to its practice, including adjusting its staffing levels, continually monitoring whether the number of radiologists is sufficient to meet the workload demand, having a contract with another radiologist agency to provide remote reporting services when necessary, setting planned leave at two radiologists at a time, and creating protected times where radiologists can work uninterrupted. The radiology service also plans to decrease interruptions from technicians for advice by reviewing its CT and MRI protocols, and to reduce the time radiologists have to spend on vetting referral requests by

considering changing this to an electronic process. I consider these changes to be both necessary and appropriate in the circumstances.

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### **Opinion: DHB1 — Other comment**

94. Mrs A had several interactions with DHB1 in relation to pain from 2011 until her diagnosis of multiple myeloma on 31 Month9. Mr A raised concerns that Mrs A's pain was not adequately investigated or managed during this time.
95. Mrs A was admitted to Hospital 1 in 2011, in respect to her atypical chest pain, for which investigations were carried out. Her next contact with DHB1 was following her referral to the older peoples' health service in Month6. She was seen by an occupational therapist and referred to the pain service, presenting to the Emergency Department in the interim.
96. My expert advisor, general physician and geriatrician Dr David Spriggs, advised me that the assessment and management of Mrs A when she presented to the Emergency Department on 6 [Month8] was "in keeping with accepted standards of care". I accept this advice.
97. Dr Spriggs noted that the assessment by the pain service on 27 Month8 lacked careful consideration of the differential diagnosis. However, he advised that if the lumbar spinal X-ray report was available to Dr D, then it is acceptable that she concluded that the pain was due to degenerative disease. On 27 Month8, Dr D recorded: "[Mrs A] has X-rays showing ... degenerative spinal disease." Therefore I consider that Dr D did have available the X-ray report of 24 Month1 and, in my view, it was acceptable for her to conclude that the cause of Mrs A's pain was degenerative disease.
98. Mrs A was admitted to Hospital 1 on 21 Month9, but her back pain was not investigated further until 28 Month9. Dr Spriggs advised:

"When [Mrs A] represented on 21 [Month9] she was appropriately assessed in the Emergency Department, she was admitted to the wards and further managed. While it took until the 28 [Month9] for the doctors to consider a diagnosis other than degenerative back disease, once they did so they performed appropriate tests in a timely manner. The delay in initiating investigations was understandable in the clinical context."
99. I acknowledge that Mrs A suffered significant pain for a long time before her diagnosis of multiple myeloma, so it is understandable that concerns have been raised about the care she received when presenting to DHB1 with pain. I note that Mrs A suffered from numerous other health problems, and that the X-ray of 24 Month1 misled DHB1 staff into thinking that degenerative changes were the source of Mrs A's symptoms. I accept Dr Spriggs' advice and consider that the care Mrs A received from DHB1 in relation to the investigation and management of her pain was reasonable in the circumstances.

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100. Mr A also raised other concerns about Mrs A's 21 Month9 admission, including the bruising Mrs A suffered from the use of the hoisting belt, the attitude and manner of nursing staff, and having to supply Hospital 1 with Mrs A's chair. It is understandable that concern has been raised about Mrs A's bruising, but I consider it likely that it was a result of her health issues. Dr Spriggs has advised me that "there is nothing in the notes to suggest that her care was provided in anything other than a professional manner". I agree. I acknowledge that Mr A felt that staff were not treating Mrs A with respect, and DHB1 has apologised for any comments construed as negative. However, it appears that nursing staff were trying to encourage Mrs A in her rehabilitation. I do not consider it to be inappropriate that Mr A was asked to bring in Mrs A's chair in order to make her more comfortable.
101. Lastly, Mr A raised concerns about the care Mrs A received after she was transferred back to Hospital 1 from Hospital 2. DHB1 told HDC that it was not aware of Mrs A's room being too cold, and that she was put under 24-hour surveillance when this was required, and she was reviewed multiple times by medical staff at that time.
102. Dr Spriggs advised me: "When [Mrs A] returned to [Hospital 1] on 05 [Month12] she was appropriately assessed and cared for. It seems that her family were kept well informed and her clinical management by the doctors and nursing staff was appropriate." I accept Dr Spriggs' advice and consider that the care provided to Mrs A during her 5 Month12 admission was appropriate.
103. Overall, I am satisfied that the care Mrs A received from DHB1 was in accordance with accepted standards.
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## Recommendations

104. I recommend that Dr B:
- a) Have an independent radiologist peer perform a review of a random selection of his reports completed in the last 12 months, and provide the results to HDC within three months of the date of the final report.
  - b) Provide a written apology to Mr A. The apology should be sent to HDC within three weeks of the date of this report for forwarding to Mr A.
105. I recommend that the radiology service review the effectiveness of the changes it has made, and report back to HDC with the results of the review. I expect this to include an update on the progress of its plans to decrease interruptions to radiologists from technicians for advice by reviewing its CT and MRI protocols, and to reduce the time radiologists have to spend on vetting referral requests by considering changing this to an electronic process. This information should be sent to HDC within six months of the date of this report.
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## Follow-up actions

106. A copy of this report will be sent to DHB1 and the Coroner.
107. A copy of this report with details identifying the parties removed, except the experts who advised on this case, will be sent to the Medical Council of New Zealand, the Royal Australian and New Zealand College of Radiologists, and the Australian Health Practitioner Regulation Agency, and they will be advised of Dr B's name in covering correspondence.
108. A copy of this report with details identifying the parties removed, except the experts who advised on this case, will be placed on the Health and Disability Commissioner website, [www.hdc.org.nz](http://www.hdc.org.nz), for educational purposes.

## Appendix A: Independent radiologist advice to the Commissioner

The following expert advice was obtained from radiologist Dr David Milne:

“You have requested that I provide a report on the imaging performed on [Mrs A]. I have been provided with the printed referral for radiographs of the pelvis, left hip and lumbar spine requested by [Dr C], presumably [Mrs A’s] GP, and the imaging subsequently performed on 24 [Month1] supplied on CD ROM in DICOM format.

The request submitted for imaging on 11 [Month1] highlights symptoms of ‘Increasing night pain over the last 6 months in Lhip and lumbar spine’.

I have reviewed the imaging performed at [the radiology service] on 24 [Month1]. The imaging is of diagnostic quality.

My report on this imaging is:

*There is bone destruction involving the anterior aspect of L2 vertebral body and the superior aspect of the right ala of the sacrum in keeping with metastatic malignancy.*

*There is mild to moderate diffuse degenerative disc disease throughout the lumbar spine and osteoarthritis in the facet joints allows a mild degree of spondylolisthesis at L4/5 and L5/S1.*

*The hips show mild but symmetrical cartilage loss bilaterally.*

*Comment:*

*Metastatic bone disease to L2 and the right sacrum. Further investigation for the primary lesion is indicated.*

I would be happy to provide further advice on this case if required.”

The following further expert advice was obtained from Dr Milne:

“I have previously provided my own report on imaging performed on [Mrs A] dated 24 [Month1]. This imaging comprised radiographs of the pelvis, left hip and lumbar spine requested by [Dr C], presumably [Mrs A’s] GP.

I have now been asked to provide further advice on this imaging and the report of the imaging made at the time it was performed by [Dr B], Radiologist [the radiology service].

I have been supplied:

Relevant sections of the original complaint to HDC

[Dr B’s] radiology report of 24 [Month1]

Letter from [Dr B to HDC responding] to the original complaint and to my report on the imaging.



Specifically I have been asked for comment on:

The differences between my interpretation of the 24 [Month1] imaging and [Dr B's] radiology report

What the accepted standard of care was in this case

If there was a departure from the accepted standard of care, how significant did I consider the departure was and how it would be viewed by my peers

Any other matters I considered relevant.

**The differences between my interpretation of the 24 [Month1] imaging and [Dr B's] radiology report**

The report I supplied your office on the imaging of the pelvis, left hip and lumbar spine performed on 24 [Month1] was:

*There is bone destruction involving the anterior aspect of L2 vertebral body and the superior aspect of the right ala of the sacrum in keeping with metastatic malignancy.*

*There is mild to moderate diffuse degenerative disc disease throughout the lumbar spine and osteoarthritis in the facet joints allows a mild degree of spondylolisthesis at L4/5 and L5/S1.*

*The hips show mild but symmetrical cartilage loss bilaterally.*

*Comment:*

*Metastatic bone disease to L2 and the right sacrum. Further investigation for the primary lesion is indicated.*

I now have the report of [Dr B] on the same imaging which reads:

*Multilevel chronic disc degeneration with loss of disc height at all lumbar levels except at L3/4 which remains normal. Mild osteoarthrosis of lumbar facet joints. 3mm retrolisthesis L1 on L2 and L2 on L3. Anterolisthesis 5mm L4 on L5 and 8mm anterolisthesis L5 on S1.*

*The pelvic ring, SI joints, symphysis pubis and both hip joints are normal.*

The differences between these reports are to do with my reporting of areas of bone destruction in L2 and the right ala of the sacrum, in my opinion, suspicious of malignant and metastatic bone disease. There are minor differences in the reporting of the degenerative changes within the spine but overall these are inconsequential.

**What was the accepted standard of care in this case?**

I have had the imaging of the lumbar spine and pelvis reviewed by 8 radiologists [...]. All are registered with MCNZ under the vocational scope of Diagnostic and



Interventional Radiology. I showed the imaging to a 4<sup>th</sup> year registrar training to be a Radiologist who was working in our Department.

The history I supplied them was ...

*'Increasing night pain over the last 6 months in L hip and lumbar spine'*

... as this was the history supplied with the original request.

The 8 radiologists and the 4<sup>th</sup> year registrar all mentioned the abnormality of L2 as the first thing that they commented on when reviewing the images. All the reviewers were suspicious of a malignant bone lesion at this site that required further review and imaging. On prompting, they were unanimous that this was the key finding to make on this imaging. None of the radiologists nor the registrar were initially suspicious of a lesion involving the right ala of the sacrum as I had described. When I indicated this as a possible lesion, 2 radiologists considered that this could be a further lesion, 6 radiologists and the senior registrar considered that this was likely bowel gas.

My opinion is that the accepted standard of care in this case would be that the destruction of the anterior aspect of L2 would be mentioned in the reporting of these images, that this observation would be highlighted as the major finding on the examination and that further clinical assessment and imaging would be required to establish the underlying diagnosis of this abnormality.

***[Dr B's] report is therefore a departure from this accepted standard of care.***

Whether there is a further lesion in the right ala of the sacrum or not is uncertain. I have not reviewed other imaging of this region. In reality, whether 2 significant bone lesions or only 1 were observed on the imaging would not have altered the outcome for [Mrs A] as further imaging and clinical review would have followed in either case and the delayed diagnosis avoided. There would be no potential downside to over calling observations in this case, only to under calling as occurred.

### **How significant was the departure from the accepted standard of care?**

The reviewing radiologists and the registrar did not over look the destruction of L2 vertebral body. I do not therefore believe that this error of observation on behalf of [Dr B] falls within the accepted range of reporting standards expected by radiologists practising in New Zealand.

[Dr B] will be very disappointed in himself for overlooking this observation and will also understand the implications his failure to observe what was present on the imaging had on [Mrs A's] clinical course.

New Zealand practising radiologist peers would have *moderate disapproval* of the standard of reporting of this case by [Dr B].

As a prior convenor of Quality Assurance Meeting at [a DHB], where cases where diagnoses had been overlooked by reporting radiologists were reviewed by the radiology staff of the department, cases similar to this would be presented a few times per year. This is not to say that such reporting standards are acceptable but to highlight that from time to time radiologists who are accepted as having a good standard of practice by their peers overlook important observations. The reasons for this can be multiple and include interruptions during reporting time, work pressure and concurrent personal factors.

With this in mind and despite the likely peer disapproval of and the significance of the oversight in [Dr B's] reporting of the imaging on [Mrs A], in my opinion it **would not** be appropriate to initiate disciplinary action against [Dr B] based on this single case. It **would** be appropriate to get confirmation from the Clinical Director of the department [Dr B] works at that there are no grounds to suspect that his reporting is generally of poor standard.

### **Any other matters**

I was interested to read [Dr B's] explanation that the observed degenerative disc and facet joint disease fulfilled his requirement of a 'satisfaction of search' scenario. Symptoms mentioned in the referral for imaging included 'increasing night pain' and this is a concern for malignant bone disease rather than the radiculopathy symptoms more typically associated with degenerative disc and facet joint disease.

I would be happy to provide further advice on this case if required."

On 26 April 2016, Dr Milne provided the following further advice:

"I can understand why [Dr B] is very disappointed and very much regrets overlooking the L2 lesion on [Mrs A's] imaging. As I have explained in my advice, the lesion was there to be seen and every radiologist who reviewed the images for me was able to make the observation ...

My original interpretation of the sacral lesion as an area of bone destruction transpired to be an overcall on my behalf but in clinical practice, [Mrs A] would have received a further imaging examination based on my findings and the pathology that she had would have been disclosed and the outcome for [Mrs A] potentially different. To criticize an over call in this case as being equivalent to an under call is inappropriate.

Radiologists make mistakes on a constant basis. Usually this is revealed in hindsight. As a Department at [a DHB], we present meetings for our Radiologists where similar significant misses are presented on an anonymous basis for group learning. Any mechanism by which Radiologists can reduce their error rates is to be encouraged.

It is misleading to accept that a Radiologist overlooking a significant observation is within the accepted standard of care. It happens but it is not acceptable. As a senior examiner for the RANZCR for over 12 years, a case such as this presented

to a candidate would lead to a 'fail' mark for that candidate if the L2 lesion was not identified and recommendations about further imaging made. However, the candidate could 'pass' the complete oral examination if they completed the remainder of the cases they were being asked to review in a satisfactory fashion. I was asked whether [Dr B] had performed the reporting of [Mrs A's] radiographs with an appropriate standard of care and I concluded that he had not. I made no assertions as to whether, in general, [Dr B] practised his work as a Radiologist at an acceptable standard.

Work place related stressors are a constant issue in Medicine and clearly affect the performance of a Doctor. While systemic issues of infrastructure and culture can be taken into account, the responsibility of any Doctor is to discharge their obligations with the patient's best interests at heart.

In consideration of the above comments and the reading of my report and [Dr B's] reply via his legal counsel, I do not see cause to change my conclusion in this single case I was asked to review and opine on. [Dr B] overlooked a significant finding on a radiograph of [Mrs A's] and his reporting on this single case was not an appropriate standard of care."

## **Appendix B: Independent physician advice to the Commissioner**

The following expert advice was obtained from general physician and geriatrician Dr David Spriggs:

“I have been asked to advise the Commissioner on the care provided to [Mrs A] by DHB1.

I practise as a General Physician and Geriatrician at [a DHB] and am vocationally registered in Internal Medicine. I have been a Fellow of the Royal Australasian College of Physicians since 1993. I have no conflict of interest in regard to this case and have read and understand the Commissioner’s guidelines for independent assessors.

I have been provided with the following documents:

1. Complaint to HDC from Advocacy Services dated [...] and the enclosed statement from Mr A regarding the DHB dated [...].
2. The DHB’s response to the complaint dated [...].
3. The DHB’s clinical notes.
4. Medical report from the DHB to ACC dated 28 [Month11].
5. A copy of this Office’s Guidelines for expert advisors.
6. Laboratory test results from [2011] onwards.
7. Copy of the Spinal and Pelvic X-ray 24 [Month1].

My instructions from the Commissioner are to review the documentation and advise whether I consider the standard of care provided to [Mrs A] by the DHB was reasonable in all of the circumstances, and why. In particular, and without limiting the scope of the request, I have been asked to comment on the following:

1. The standard of care regarding [Mrs A’s] presentation on 6 [Month8].
2. The standard of care regarding [Mrs A’s] presentation on 21 [Month9], and her subsequent admission to [Hospital 1].
3. The standard of care regarding [Mrs A’s] readmission to [Hospital 1] on 5 [Month12] (where she remained until [she died]).

I note that the Commissioner is seeking separate advice regarding the standard of care provided to [Mrs A] by [the radiology service] and by her GP.

### **BACKGROUND:**

[Mrs A’s] husband, [Mr A], approached the Health & Disability Advocacy Service and subsequently made a formal complaint to the Health & Disability Commissioner. He was dissatisfied at the level of care, skill and professional expertise provided by [DHB1] over about four years during which time [Mrs A] had ‘multiple admissions, but minimal investigations of her severe back pain’. He

feels that there were insufficient investigations and that he was not listened to by the medical or nursing staff. He feels that [Mrs A] was not respected and states that she was accused of ‘just not trying’ and she was described as the ‘most disruptive patient ever’. He also states that there was excessive bruising as a result of inappropriate use of the hoist belt. He states that on her return to [Hospital 1] from [Hospital 2] her needs were unmet and she was in an ‘unlit, cold, unsupervised room’.

[Mrs A] had several contacts with [DHB1] from 2006 onwards, in particular in [2011] she was seen with atypical chest pain and admitted for 7 days. During that admission she had an upper gastrointestinal endoscopy which was normal, a coronary angiogram which was also essentially normal and a colonoscopy as part of the investigation of a normochromic normocytic anaemia. The colonoscopy revealed extensive diverticular disease.

In [Month6] she was referred by her GP, [Dr C], to the Occupational Therapist and [Mrs A] was provided with a number of aids. The Occupational Therapist also made a referral to the pain service, however before she was seen by the Anaesthetists, she presented on 06 [Month8] to the Emergency Department with pelvic pain. She was assessed by [Dr G] (Consultant). There was a significant delay before she was seen in the Emergency Department due to high patient volumes. When she was assessed she had fallen asleep, her pain had improved and the clinical examination was essentially normal. [Dr G] ‘believes he would have checked any recent referrals ... as well as her most recent x-ray results’. This is not stated in his contemporaneous notes. I am not certain as to whether the images or the report from a spinal x-ray performed by [the radiology service] in [Month1] were available to [Dr G]. The report of that x-ray showed widespread degenerative disease as well as significant hip problems. [Mrs A] was discharged from the Emergency Department to her home. She was referred for a further occupational therapy assessment at home. She was reviewed by the Occupational Therapist on 11 [Month8] and a number of additional aides and comfort cushions were provided.

On 27 [Month8] [Mrs A] was reviewed by [Dr D], Consultant Anaesthetist, as part of the pain service. She noted that [Mrs A’s] mobility was ‘extremely limited’. Clinical examination showed ‘exquisite tenderness over her greater trochanters’ and [Dr D] felt that this was compatible with prolonged sitting in a chair and her description of the pain. It is not clear what neurological examination was performed. [Dr D] made a diagnosis of ‘musculoskeletal problem in a lady who is almost chair bound now’. She prescribed long acting opiates.

On 21 [Month9] [Mrs A] again presented to the Emergency Department. The Emergency Medical Service had been called as her husband was unable to manage her decreasing functional abilities. She was once again assessed by [Dr G] who recognised that her mobility had decreased significantly. He was concerned about cellulitis of the legs and an anaemia (Haemoglobin 82g/l) and he arranged for admission to the Medical Service under the care of [Dr E]. [Dr E] reviewed [Mrs A] at 11.10hrs on 22 [Month9]. [Dr E] noticed that [Mrs A] was extremely deaf

and she had painful hips and back. She was unable to get out of her bed. A urinary tract infection was confirmed by the laboratory and she was started on some Trimethoprim. In order to manage the ankle swelling she was also started on Spironolactone. There is no admitting neurological exam but I do note that the nurses say that she was able to get up and go to the bathroom with the assistance of one. The nurses note difficulty in communication secondary to her deafness. She needed to use hearing aids. The nurses comment that '[Mrs A] was tearful and anxious at times, reassurance+++ given'. She was given regular analgesics. [Mrs A] was reviewed medically by [Dr E] on 24 [Month9] and was also seen by Occupational Therapist and Social Worker. On 25 [Month9] she was reviewed by the Registrar and it was noted that her creatinine was increasing, indicated deteriorating kidney function. The Spironolactone and Enalapril were therefore withheld. On 26 [Month9] her creatinine had increased further to 173mmol/l and her Trimethoprim was discontinued. [Dr E] reviewed [Mrs A] on 28 [Month9] and she initiated screening for myeloma. She was also seen on that day by [the geriatrician] who took over her care.

On 29 [Month9] [Mrs A] received a unit of blood for the management of her anaemia. By the 30 [Month9] she was 'mobilising well using a Zimmer frame and two to assist'. By that stage there was a small broken area of skin on the left buttock. She was being transferred with the help of a belt. On 31 [Month9] she underwent a lumbar spine x-ray which showed 'loss of L2 vertebrae' followed by an MRI scan which showed destruction of L2 and 'significant (spinal) cord compression'. The Orthopaedic Registrar was asked to see her and he noted significant weakness and sensory loss in the L2/L3 distribution. At 1700hrs on 31 [Month9] Medlab reported a monoclonal gammopathy which, in effect, clinched the diagnosis of myeloma. She was transferred to [Hospital 2] Orthopaedics Service on 01 [Month10].

In [Hospital 2] she underwent stabilisation of her spine on 07 [Month10]. This was complicated by Invasive Aspergillosis of the lungs, Pseudomonas pneumonia, Clostridium difficile diarrhoea, malnourishment, perforated duodenal ulcer which was treated conservatively, possible ischaemic hepatitis and an acute coronary syndrome. The diagnosis of multiple myeloma was confirmed by bone marrow biopsy. She was given a single cycle of chemotherapy for the myeloma. Radiation was not given.

[Mrs A] was transferred back to [Hospital 1] on 05 [Month12] with clear instructions for ongoing management. She was reviewed by [Dr E] on 06 [Month12] and it was decided that [Mrs A] would not be for resuscitation in the event of cardiopulmonary arrest. She was extremely disabled tolerating only sips of fluid and small amounts of puréed food. She was requiring total nursing cares. On 10 [Month12] there was a discussion between the House Officer and the GP, particularly with regard to how [Mr A] was coping. [Mr A] by that stage was clearly aware of [Mrs A's] grave prognosis. By 12 [Month12] [Mrs A] had declined, she had become more short of breath and feverish and was probably clinically volume overloaded. She was discussed further with [Dr E] and transferred to the High Dependency Unit. At 2100 hours on 12 [Month12] she was



reviewed by the Consultant Anaesthetist and it was decided that she should not be for further escalation in cares. This was discussed with the family. She had become more anaemic and she was given blood. Her troponin rose significantly in keeping with further myocardial injury. By the morning of 14 [Month12] her urine output had decreased significantly, she was hypotensive. [Mrs A] was treated with gentamicin and a frusemide infusion. [Mrs A] died. Her death was referred to the Coroner.

I note throughout both admissions to [Hospital 1], careful nursing records and frequent discussions with [Mr and Mrs A]. The recorded notes are sensitive and respectful.

In the letter from [the Clinical Projects Manager] he acknowledges [Mr A's] allegation that the nursing staff were unsympathetic. He apologises 'unreservedly for any comments construed as negative'. He was unable to identify the staff member who was accused of saying [Mrs A] was 'the most disruptive patient they had ever had'. He also acknowledges that when [Mrs A] returned from [Hospital 2] she was placed in a single room [and that] this was because of her infectious diarrhoea. The Nurse Manager was not made aware that the room was too cold; however they had been having difficulties with 'balancing our air conditioning system to achieve a set temperature that suits all patients'. [DHB1] is attempting to rectify this. [The Clinical Projects Manager] states that with regard to the lighting [Mrs A] did have her handset and the staff would have helped her switch the lights up and down if needed.

An x-ray of the pelvis and spine from 24th [Month1] had been done in the community. The report at the time suggested widespread degenerative changes; however it is acknowledged that on review this x-ray showed a lytic lesion at L2. It is not clear when the images and this amended report became available to DHB1 staff, if at all. I have reviewed these images and I would not have expected a General Physician or Geriatrician to have correctly interpreted them.

On review of the blood tests [Mrs A] had a mild anaemia (Hb 110g/l) in late 2011 with a CRP of 9. I would not expect this to have led to investigation for Myeloma. The blood tests remained stable through 2013. It was only on the admission of 21 [Month9] that the anaemia became more severe and the inflammatory markers were elevated appropriately prompting further investigation.

#### OPINION:

1. When [Mrs A] presented to the Emergency Department on 06 [Month8] she was assessed by an Emergency Physician. It is not clear whether the report on the x-ray from the community was available. No blood tests were performed. [Dr G's] assessment and management were in keeping with accepted standards of care. [Mrs A] was referred to the Occupational Therapists for further assessment and support.
2. When [Mrs A] represented on 21 [Month9] she was appropriately assessed in the Emergency Department, she was admitted to the wards and further

managed. While it took until the 28 [Month9] for the doctors to consider a diagnosis other than degenerative back disease, once they did so they performed appropriate tests in a timely manner. The delay in initiating investigations was understandable in the clinical context. I do not believe that this delay had any long term bearing on the tragic outcome for [Mrs A].

I acknowledge [Mr A's] distress at his wife's bruising caused by the attempts of staff to mobilise [Mrs A]. However, there is nothing in the notes to suggest that her care was provided in anything other than a professional manner.

3. When [Mrs A] returned to [Hospital 1] on 05 [Month12] she was appropriately assessed and cared for. It seems that her family were kept well informed and her clinical management by the doctors and nursing staff was appropriate.

In addition to the above I should comment that the assessment by the pain service on the 27 [Month8] lacked careful consideration of the differential diagnosis. However if the Anaesthetist had available the lumbar spinal x-ray report it is acceptable that she assumed the pain was due to degenerative disease.

The concerns of [Mr A] with regard to the quality of the nursing care are important. There is, however, nothing in the clinical records that would suggest that [Mrs A's] care was anything other than of an appropriate professional standard. Clearly if adverse comments were made to [Mrs or Mr A] these would have been [un]acceptable.

Should you require any further information please do not hesitate to contact me.”