Health and Disability Commissioner
Te Toihau Hauora, Hauātanga

A Decision by the Deputy Health and Disability Commissioner

(Case 23HDC00211)

Introduction

1. The Health and Disability Commissioner (HDC) received a complaint from Ms A about the radiology services provided to her by Dr B (CT scans[1]) and Dr C (MRI[2] scan) at a radiology service. The following issues were identified for investigation:

- *Whether Dr B provided Ms A with an appropriate standard of care on 10 August 2020 and 9 August 2021.*
- *Whether Dr C provided Ms A with an appropriate standard of care on 20 September 2021.*
- *Whether the radiology service provided Ms A with an appropriate standard of care on 10 August 2020, 9 August 2021 and 20 September 2021.*

2. The issue of the 10 August 2020 CT scan has been addressed in correspondence separate to this opinion.

[1] Computed tomography.
[2] Magnetic resonance imaging

Names have been removed to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

3. This is the opinion of Dr Vanessa Caldwell, Deputy Health and Disability Commissioner, and is made in accordance with the power delegated to her by the Commissioner. The report concerns the care provided to Ms A in August and September of 2021 and discusses missed opportunities for earlier detection of her cancer in the 2021 CT and MRI scans.

4. The parties directly involved in the investigation were:

Ms A	Complainant/consumer
Dr B	Provider/radiologist
Dr C	Provider/radiologist
Radiology service	Provider

5. Further information was received from the Accident Compensation Corporation (ACC).

6. After being notified of this investigation, the radiology service provided a further internal review and received advice about the radiology scans from:

- Dr D: a consultant radiologist at another radiology service[3]; and
- Dr E: a consultant radiologist at the radiology service in another region.[4]

7. Their advice has been included in this report where relevant.

8. Ms A was provided with the opportunity to comment on the relevant 'events leading up to complaint', 'background and information gathered' and 'changes made since events' sections of this report.

9. Dr C, Dr B, and the radiology service were given the opportunity to comment on the relevant sections of the provisional report. Responses have been included in the report where relevant.

Events leading up to complaint

10. In 2017, Ms A was diagnosed with malignant melanoma in transit, with metastases[5] to her right proximal thigh, for which she received successful immunotherapy. As part of ongoing monitoring for this cancer, Ms A received yearly 'surveillance' CT scans. Dr B was the radiologist reporting on each of Ms A's CT surveillance scans since her 2017 diagnosis.

11. In August 2022, Ms A underwent a routine mammogram, which detected a lump in her left breast. Subsequent testing,[6] including a CT scan conducted on 27 September 2022 by Dr B, indicated that this was metastatic breast cancer,[7] which was in her lymph nodes and had spread to her liver. The 2022 CT scan reported the following:

[3] Dr D specialises in both body imaging and breast imaging and does not work with either Dr B or Dr C.
[4] Dr E specialises in breast imaging and sought views from radiologist colleagues.
[5] The spread of cancer cells from the place where they first formed to another part of the body.
[6] An ultrasound and a needle biopsy.
[7] The spread of cancer cells from the place where they first formed to another part of the body.

> 'A 30mm well circumscribed mass with low-density central component is seen in the left breast …
>
> Two enlarged left axillary lymph node[s] are noted measured at 12 and 20mm short axis …
>
> [Regarding the liver] At least 4 lesions are seen, the largest … measured at 29mm.'

12. Ms A received a terminal diagnosis and has undergone palliative chemotherapy treatment.

13. Ms A raised concerns about how the cancer had progressed to her liver so quickly and requested a review of the CT and MRI scans conducted in 2021, to determine whether cancer was visible at that stage.

Radiology service audit meeting November 2022

14. On 17 November 2022, Ms A's case was presented at an audit meeting. The consensus at the meeting was that in both the CT and MRI scans of 2021, 'axillary lymphadenopathy' (abnormality of the lymph nodes) was present on her left side.

15. Dr B reviewed and reported on the 9 August 2021 CT scan, which was of Ms A's chest, abdomen, and pelvis. The audit meeting classed Dr B's failure to identify the lymph node abnormality as a 'Perception error type 1 — an abnormality related to a clinical presentation not detected'.

16. Dr B also reviewed and reported on a CT scan dated 10 August 2020.

17. Dr C reviewed and reported on the 20 September 2021 MRI scan of the shoulder following injury. The audit meeting classed his failure to identify the lymph node abnormality as a 'Perception 2 error — Incidental abnormality not related to [the clinical reason for the scan], but possibly/definitely significant'.

CT scan report of 9 August 2021: Background and information gathered

18. On 9 August 2021, as part of the surveillance for her previous melanoma, Ms A underwent a CT scan of her chest, abdomen, and pelvis. The scan was reviewed and reported by Dr B on the same day.

19. Under the section for clinical notes, the report records Ms A's history of melanoma in her right thigh and notes that it was treated with curative intent and monitored with CT surveillance scans. The report states that the 2021 scan was compared with the previous scan reported on 10 August 2020. Under 'findings', Dr B reported the following:

> '**Primary lesion**
> Not imaged
>
> **Lymph nodes**
> No abnormal lymph nodes

Metastases
Lungs: None seen
Liver: None seen

COMMENT:
No evidence of recurrence or metastases is seen.'

Information provided by Dr B

20. Dr B told HDC that in line with his usual practice, he compared the 2021 CT scan with the previous 2020 scan to assess for any abnormalities. Dr B said that he noted slight asymmetry of Ms A's left breast tissue in 2020 and also on the 2021 scan. However, as it did not appear significant, and a mammogram had been performed in 2020 and CT imaging can be 'insensitive for breast lesions', he did not consider it significant and did not comment on it in the report. Dr B said that there were no policies or procedures for reporting on breast asymmetry as part of a CT scan, because of CT insensitivity for breast assessment, and he noted that mammography is more sensitive.

21. Regarding the lymph nodes, Dr B told HDC:

> 'With the benefit of hindsight, I can identify that there are also two enlarged axillary lymph nodes. My main focus with reporting the CT scan was to assess for recurrence from the initial tumour, which was in the right leg. Additionally, it was to check the normal pathways for recurrence and metastases that occur from melanoma in this region — usually it would ascend along the lymph nodes on the right side of the lower limb, then into the abdomen. I note the concept of "inattentional blindness" in this regard. The presentation of breast cancer was not what I was looking for.'

22. Dr B stated that he would like to apologise to Ms A for not identifying and reporting on the lymph nodes and possible asymmetry of the breast tissue, which may have prompted a repeat mammogram. Dr B advised that he would be very happy to provide a written apology to Ms A.

23. Dr B told HDC that he has now changed his structured report to include expanding the review areas outside those of an expected tumour biology.

Information provided by radiology service

24. As outlined in paragraph 14, after Ms A's diagnoses in October 2022, an audit identified that abnormal lymph nodes were visible on the 2021 scan. The radiology service acknowledged that an error was made by Dr B when he failed to identify and report on Ms A's abnormal lymph nodes.

25. After receiving notification of the HDC investigation, in February 2024 the radiology service conducted a further internal review and received opinions about the CT reporting from Dr D and Dr E.

Dr D

26. Dr D reviewed the 2021 CT scan with specific reference to Ms A's diagnosis of left breast cancer. Dr D reviewed the 2021 CT scan in conjunction with Ms A's previous CT scans and identified both the abnormal lymph nodes[8] and the asymmetry in the left breast.[9] He stated:

> 'I would have been unlikely to have noted the [asymmetry] had I been reporting this case and would likely have attributed the left axillary lymph nodes to metastatic melanoma, given the clinical information provided (i.e. surveillance post melanoma treatment), and that CT is not the most appropriate modality for breast cancer …'

Dr E

27. On 28 February 2024, Dr E presented Ms A's 2021 CT scan at a cancer review meeting, where it was reviewed by the radiologists. In the report, Dr E noted the presence of both the abnormal lymph nodes and the left breast asymmetry. Dr E stated:

> 'Regarding the CT Chest/Abdomen/Pelvis/Legs scan performed on 09/08/2021: The radiologists noted multiple abnormal lymph nodes in the left axilla, which they considered should have been reported. They commented that with the benefit of knowledge of the known breast malignancy that they could see an abnormality in the left breast but that they would not expect a general radiologist to have reported this. There was comment made that CT is not a reliable method to diagnose malignancy within the breast, and there was discussion that in everyday practice we frequently deal with referrals for workup of CT findings in the breasts that prove to be normal.'

Peer review of scans

28. The radiology service said that it had an established 'Peer learning program' using the peer review functionality in its image viewer programme, InteleViewer, to ensure accuracy and foster continuous improvement. Peer review does not happen automatically on every report.

29. The radiology service advised that when reporting a study, radiologists routinely reviewed previous imaging studies and reports to compare them with the one being reported. Feedback on the accuracy of previous reports may be submitted in the Peer Review system. When in agreement, feedback is not always required or given. When there is discordance in opinion, or when a radiologist wishes to acknowledge an excellent piece of work, feedback should be given.

30. The radiology service and Dr B told HDC that Dr B was the only radiologist to review and report on Ms A's CT scan. Dr B also advised that he had reported on Ms A's previous five CT scans. As a result, he was reviewing and comparing his own reports, and it appears that there had been no other peer review of Ms A's reports for the previous five years.

[8] Reported as: 'Enlarged and morphologically abnormal left axillary and subpectoral nodes are now evident, largest with a short axis diameter of 15–15 mm.'

[9] Reported as: 'A focus of density in the upper outer quadrant of the left breast is also evident and more prominent and mass like than on the most recent CT.'

31. The radiology service told HDC that radiologists receive fortnightly reports of the cases that have been reviewed, and appropriate cases are presented at the three-monthly meeting of radiologists for educational purposes.

Information provided by ACC

32. In May 2023, as part of Ms A's ACC assessment for 'delayed diagnosis of metastatic breast cancer',[10] external clinical advice on the 2021 scan was sought from a radiologist. A copy of this external advice was provided to HDC by ACC.

33. The radiologist was asked to comment on, among other things, whether the imaging showed 'left axillary lymphadenopathy' (abnormal lymph nodes). The radiologist identified the lymph node abnormality, described as a 17mm left axillary lymphadenopathy and a 16mm left sub pectoral node. The report stated that 'the preceding CT date 9/8/21 also shows the left axillary lymphadenopathy …'.

Opinion: Dr B — breach

34. First, I acknowledge the distressing impact of these events on Ms A and her family. Given the news of how quickly her disease appeared to have spread when she had been undergoing regular screening, it is understandable that she and her family sought an independent review from HDC.

35. In forming my opinion, I considered whether there was a need for independent external advice. I am of the view that the reviews/advice provided by the November 2022 radiology service audit meeting, the ACC external advice, and the February 2024 reviews of Dr D and Dr E provided by the radiology service are sufficient to inform my opinion. I accept the views outlined in each of those reports, which are discussed below.

36. As set out above, Ms A's CT scan was reviewed and reported on by Dr B on 9 August 2021. Dr B reported 'no abnormalities' in Ms A's lymph nodes and did not comment on the asymmetry in her left breast.

Breast asymmetry

37. Dr B stated that he had noticed slight asymmetry in Ms A's left breast in 2020 and 2021 but did not report on this because CT scans are insensitive to breast lesions. The ACC radiologist, Dr D, and Dr E each agreed that it was within accepted standards that Dr B did not comment on Ms A's breast asymmetry for this reason. I accept the views in these reports and accordingly I am not critical of Dr B for not reporting the asymmetry in 2021. I find no breach of the Code of Health and Disability Services Consumers' Rights (the Code) on this point.

Lymph nodes

38. The nature of radiology reporting is complex, and it is widely accepted that due to perceptual errors, radiologists may from time to time miss details on scans. Previously this

[10] 'CT and MRI scans in Sept showed but not reported left axillary lymphadenopathy.'

Office has noted that just because it is widely accepted that errors of perception (such that a radiologist misses an apparent abnormality that would have been detected by most of his or her peers in similar circumstances) occur in a small but persistent number of radiology interpretations, that is not determinative in assessing whether the standard of care has been met in a particular case.[11]

39. Whether the standard of care has been met will be assessed on a range of factors, including the clinical history of the patient and how obvious the abnormality is. The standard of care applicable in the present case is the care and skill that an ordinarily careful radiologist would exercise under similar circumstances.

40. In the circumstances of this case, Ms A's CT scan was specifically for surveillance related to Ms A's previous cancer diagnosis. This information was presented on the referral form and included in Dr B's report. On this basis, I consider that Dr B should have been aware that Ms A was at higher risk of developing metastases and was on notice to screen specifically for this purpose, including examining lymph nodes.

41. In his report under lymph nodes, Dr B reported 'no abnormalities'. Dr B has agreed that in hindsight the abnormal nodes are visible. He stated that he had 'inattentional blindness' as he was looking for pathways associated with Ms A's previous melanoma, which would be expected to traverse the right side of the body (whereas the abnormal lymph nodes were on the left). This raises concern that Dr B focused on the expected pathway of the disease at the expense of a thorough analysis of the rest of the scan, and I am critical of him in this regard.

42. Dr B was provided with the opportunity to comment on the provisional opinion and advised that he accepts the opinion. Dr B has provided HDC with an apology letter for Ms A and has expressed regret for his error.

43. The reviews of the scans conducted by the radiology service's audit, the ACC external advisor, Dr D, and Dr E unanimously agreed that Ms A's abnormal lymph nodes were visible on the 2021 CT scan and should have been reported. Dr B himself has acknowledged this. I accept these views, and I consider that an ordinary radiologist in these circumstances exercising reasonable care and skill would have detected and reported on Ms A's abnormal lymph nodes. Accordingly, I find that Dr B failed to provide Ms A with an appropriate standard of care on 9 August 2021, in breach of Right 4(1) of the Code.[12]

MRI report of 20 September 2021: Background and information gathered

44. On 3 August 2021, Ms A was referred for an MRI of her left shoulder after sustaining an injury in an accident. The MRI was reviewed and reported by Dr C on 20 September 2021.

[11] See opinions 15HDC00685 and 17HDC00415.

[12] Right 4(1) states: 'Every consumer has the right to have services provided with reasonable care and skill.'

45. The referral contained the following relevant 'clinical information', which was noted in the 20 September report:

> 'Injured shoulder ? status of cuff. Ultrasound full thickness tear supraspinatus, effusion posterior glenohumeral joint, thickened subacromial subdeltoid bursa.'

46. Dr C's report findings noted that Ms A had a tear in her left supraspinatus tendon. There was no comment on, or reporting of, her lymph nodes.

Information provided by Dr C

47. Dr C told HDC that the radiology service's audit meeting of 17 November 2022 was the first time he became aware of Ms A's diagnosis and that abnormal lymph nodes were visible on the MRI scan.

48. Dr C told HDC:

> '… I agree with this and acknowledge I made an error in interpreting this study and missed an opportunity to trigger further investigation …
>
> [On learning of the diagnosis] I was devastated at the time and I sincerely regret I didn't detect the abnormal lymph nodes present on the scan. These were on the edge of the scan, not immediately obvious, and I was focused on the shoulder injury and reporting for surgery …
>
> I have since reflected on this matter and have changed my approach to shoulder MRI reporting in terms of the search pattern I use to detect expected and unexpected findings …
>
> I sincerely apologise to [Ms A] and her family.'

49. Dr C advised that in addition to the changes in his practice mentioned above, he specifically interrogates areas on shoulder MRI where an unexpected finding could be detected, such as the axilla or lungs.

50. Dr C noted that in Ms A's complaint, she raised concern about how the lymph nodes were missed, as she understood that several people reviewed the scans before they were reported on. Dr C advised that this did not occur in this case as it is not the standard practice for diagnostic radiology such as MRI scans of the shoulder, but that it would be the case for breast imaging and screening. The Standards of Practice for clinical radiology[13] outline that 'a single named clinical radiologist is to be responsible for the supervision, interpretation and reporting of the entire study'.

[13] Standard 5.5.1 Interpretation and reporting the results. See https://www.ranzcr.com/college/document-library/ranzcr-standards-of-practice-for-diagnostic-and-interventional-radiology

Information provided by radiology service

51. The radiology service acknowledged that Dr C erred in not identifying Ms A's abnormal lymph nodes. The error was classified as a 'Perception error 2 — Incidental abnormality not related to [the clinical reason for the scan], but possibly/definitely significant'.

52. The radiology service told HDC:

> 'Whilst [Dr C] did not appreciate the presence of the lymph nodes on the dedicated MSK MRI shoulder examination performed on 20 September 2021, [the radiology service] does not consider this to be a significant departure from the standard expected of our radiologists, given that this study was tailored to assessment of the shoulder joint.'

Dr D

53. The radiology service asked Dr D to review/report on the 2021 MRI. He advised:

> '[A]n abnormal subpectoral lymph node is visible on all of the scan series …
>
> However, as this is an examination tailored to assessment of the shoulder joint, this node could easily be overlooked.'

Information provided by ACC

54. The external advice provided by a radiologist for ACC states that Ms A's abnormal lymph nodes were visible on the 20 September 2021 MRI.

Opinion: Dr C

55. On review of the MRI scan, there is unanimous agreement from the radiology service, Dr D, the ACC radiologist, and Dr C himself, that an abnormal lymph node was visible.

56. As outlined in paragraphs 38–39, that a perception error has occurred does not necessarily mean that the standard of care has not been met. Determining whether the standard of care has been met includes assessing factors such as clinical history of the patient and how obvious the abnormality is.

57. In the circumstances of this case, Ms A's MRI referral form and relevant 'clinical information' focused specifically on her shoulder joint with the aim of determining the extent of her injury. The referral did not include Ms A's other clinical history relevant to cancer and her potentially increased risk of metastasis.

58. Dr D's external review noted that although the abnormalities were visible, given that the MRI referral request was tailored to the shoulder joint as a result of an injury, it 'easily' could have been overlooked. Dr C stated that the abnormalities 'were on the edge of the scan, not immediately obvious'.

59. The radiology service acknowledged that Dr C made a 'Perception error 2 — Incidental abnormality not related to [the clinical reason for the scan], but possibly/definitely

significant'. The radiology service is of the view that Dr C's error was not a significant departure from the standard expected of radiologists, as the review and report was specifically for the shoulder joint.

60. I accept the radiology service's view on this point. I am critical of Dr C that the abnormality was missed, but I consider that this occurred under mitigating circumstances where the abnormality was not particularly obvious; Dr C was directed to examine the shoulder for injury rather than disease; and he did not have any clinical information to suggest that Ms A might be at increased risk of abnormalities.

61. Dr C was provided with the opportunity to comment on the provisional opinion, and he advised that he accepts the opinion.

62. I acknowledge that Dr C has provided HDC with an apology letter for Ms A and has since changed his practice to ensure that shoulder MRIs include interrogation of the axilla and lungs.

Radiology service — other comment

63. As a healthcare provider, the radiology service is responsible for providing services in accordance with the Code.

64. The radiology service's peer review system has been outlined above in paragraphs 28–30. Radiologists routinely review previous imaging studies and reports to compare them with the one they are reporting. Where there is a 'discordance' in opinion, this may be recorded in the peer review system for feedback and potential review.

65. I note that in Ms A's case, Dr B was reviewing and comparing his own CT reports for the previous five years, none of which had been peer reviewed at that time. Noting that Dr B himself stated that he had 'inattentional blindness', I consider that without appropriate safeguarding (i.e., ensuring peer review/second opinion in instances of radiologists reviewing their own previous scans), this may represent an area of potential systemic risk for the radiology service. The benefits of a 'fresh eyes' approach may assist in reducing the risk of similar errors being overlooked. I encourage the radiology service to consider ways in which it can mitigate the systemic risk in having the same radiologists reviewing repeated screening scans.

Changes made since events

66. Dr B has advised that he has changed his reporting to review areas outside those of expected tumour biology. Dr B provided HDC with evidence that between September 2023 and February 2024 he has had his reports double read by a colleague to improve accuracy.

67. Dr B has read specific resources and engaged in a reflective summary to develop and apply his knowledge of CT reporting further, and he has worked closely with supervisors to develop more accuracy.

68. Dr C has advised that he has changed his practice to ensure that shoulder MRIs include interrogation of the axilla and lungs.

69. The radiology service has advised that it will create a policy document for the established peer learning programme.

Recommendations

Dr B

70. In response to my provisional opinion, Dr B provided a formal written apology to Ms A for the matters outlined in the report. Therefore, this recommendation has been met.

71. I recommend that in addition, Dr B:

a) Arrange for a clinical peer review of the accuracy of 10% of his radiology reporting for CT scans from the three months prior to this report, and, within three months of the date of this report, report back to HDC on any actions taken or planned to mitigate any issues arising from the clinical peer review.

b) Continue to adopt the changes made to his practice by ensuring that areas outside those of expected tumour biology are examined as well as having a self 'second look' to improve accuracy.

Dr C

72. In response to my provisional opinion, Dr C provided a written apology to Ms A for the matters outlined in the report. Therefore, this recommendation has been met.

73. I recommend that Dr C continue to adopt the changes made to his practice by ensuring that shoulder MRIs include interrogation of the axilla and lungs. Dr C is to provide HDC with evidence of having done so over a three-month period from receipt of this decision.

Radiology service

74. I recommend that the radiology service:

a) Use an anonymised version of this case for wider education of its radiologists. The case study presentation should detail the actions/decisions taken, the results of these actions/decisions, and the appropriate course that should have been taken to arrive at a more desirable outcome. Evidence confirming the content of the presentation (for example, presentation material, a record of communication to peers, or an attendance record) is to be provided to HDC within three months of the date of this report.

b) Within six months of the date of this report, provide an update on the development and implementation of the new peer learning and peer review policy.

c) Provide an update on the Clinical Advisory Group's consideration of a 'fresh eyes' peer review process for repeated reporting examinations for the same patient by the same radiologist.

d) Within three months of the new peer learning and peer review policy being introduced, conduct an evaluation of its effectiveness. This should include (but is not limited to) an evaluation of compliance rates and a staff survey confirming whether the peer learning and peer review policy is being utilised effectively in practice, including assessing its rate of compliance.

Follow-up actions

75. A copy of this report with details identifying the parties removed will be sent to the Medical Council of New Zealand, and it will be advised of Dr B's and Dr C's name.

76. A copy of this report with details identifying the parties removed will be sent to Te Aho o Te Kahu|Cancer Control Agency and the Royal Australian and New Zealand College of Radiologists and placed on the Health and Disability Commissioner website, www.hdc.org.nz, for educational purposes.