# District Health Board

## A Report by the
## Deputy Health and Disability Commissioner

## (Case 19HDC01944)

Health and Disability Commissioner
*Te Toihau Hauora, Hauātanga*

## Contents

## Executive summary

1. This report concerns the care provided to a man during his treatment of cancer at two district health boards. In particular, it concerns a delayed realisation of the need for preoperative imaging to establish suitability for surgery. If the lung metastases visible in preoperative imaging had been recognised before surgery, this would have prevented the man's liver resection surgery from going ahead, and put him on a palliative care pathway sooner.

2. The report highlights the importance of having guidelines and policies in place to facilitate careful, thorough, and timely reporting of preoperative imaging.

### Findings

3. The Deputy Commissioner found that the first district health board (DHB1) breached Right 4(1) of the Code because the man's lung metastases were not identified prior to surgery. The missed identification of metastatic lung disease was due to a series of systems failures, including not identifying the need for preoperative imaging until five days prior to surgery, the lack of a system in place to ensure that the CT scan was reported on by a radiologist prior to surgery, and an absence of guidelines, protocols, or policies to guide clinicians who receive images that have not been reported on.

4. The Deputy Commissioner made adverse comment about the second DHB (DHB2). DHB2 carried out CT imaging on 6 April 2019 and forwarded the images to DHB1 without a report. In an attempt to expedite the man's referral, the request was not tagged as urgent, and therefore was reported on as a routine outpatient scan. This resulted in the man's scan not being read until 9 April, and contributed to the failure to identify his metastatic lung disease prior to surgery.

5. The Deputy Commissioner was not critical of the care provided by the surgeon.

### Recommendations

6. The Deputy Commissioner recommended that the DHBs each provide an apology to the man's family.

7. The Deputy Commissioner recommended that DHB1 create and implement a policy to ensure that imaging taken prior to cancer surgery should either be reported on or reviewed in conjunction with a radiologist and documented prior to surgery. The Deputy Commissioner also recommended creation of a guideline to outline which preoperative investigations should be considered before hepatocellular carcinoma surgery and when. The Deputy Commissioner recommended that in addition to this guideline, a safeguard should be created to ensure that appropriate actions occur in a timely manner before surgery.

8. DHB2 indicated that it has implemented a text messaging system in the Radiology Department for communication about urgent reports, and the Deputy Commissioner recommended that DHB2 report back on the efficacy of this initiative.

## Complaint and investigation

9. The Health and Disability Commissioner (HDC) received a complaint from Ms B about the services provided to her father, Mr A, by DHB1. The following issue was identified for investigation:

- *Whether DHB1 provided Mr A with an appropriate standard of care from January to 8 April 2019 (inclusive).*

10. This report is the opinion of Deputy Commissioner Deborah James, and is made in accordance with the power delegated to her by the Commissioner.

11. The parties directly involved in the investigation were:

| | |
|---|---|
| Ms B | Complainant |
| DHB1 | Provider |

12. Further information was received from:

| | |
|---|---|
| DHB2 | Provider |
| Dr C | Hepatobiliary surgeon |
| Dr D | Hepatologist |

13. Also mentioned in this report:

| | |
|---|---|
| Dr E | Hepatobiliary surgeon |

## Information gathered during investigation

### Introduction

14. Mr A (aged in his eighties at the time of events) had liver cancer.[1] Following a multi-disciplinary meeting (MDM) on 10 January 2019, a decision was made to proceed with a liver resection[2] for treatment of the cancer.

### Events leading up to surgery

15. On 25 January 2019, Mr A was reviewed by a hepatobiliary surgeon,[3] Dr E, to confirm Mr A's suitability for a liver resection. Dr E determined that Mr A was a suitable candidate for surgery, pending a satisfactory anaesthetic assessment.

[1] Hepatocellular carcinoma.
[2] Removal of a portion of the liver.
[3] A surgeon who treats disorders of the biliary system (which includes the liver, gallbladder, bile ducts or bile, and pancreas).

16. The pre-anaesthetic assessment was undertaken on 14 March 2019, and Mr A was deemed suitable for surgery and anaesthesia. It was noted that Mr A was at elevated risk owing to his co-morbidities.[4] Mr A was placed on the waiting list for surgery.

17. DHB1 stated that at the beginning of April 2019, Mr A had still not been given a date for surgery. This was flagged by the hepatocellular carcinoma (HCC) coordinator, who noted that the required investigations as outlined by the clinicians had been completed, and surgery was arranged for the following week, on 8 April 2019.

18. DHB1 said that Mr A was placed on hepatobiliary surgeon Dr C's list five days prior to the surgery — on 3 April 2019. Dr C reviewed Mr A's case at that time. Dr C noted that imaging had not been completed for several months.[5] This was discussed with Mr A's hepatologist,[6] Dr D. Dr D requested a CT scan to be undertaken at Mr A's domicile district health board, DHB2. The referral was dated 4 April 2019. The referral form noted that the request was urgent, because Mr A's upcoming surgery was scheduled for the following Monday (8 April 2019).

19. DHB2 advised that when referrals are received, the normal process is that they are triaged, and the triage priority result is added prior to the referral going to the booking clerk. However, in this case, the referral was hand-delivered to the duty radiologist, who took the referral directly to the CT bookings clerk to expedite the process. DHB2 said that therefore, the referral skipped the normal process where the triage priority result would have been added prior to the referral going to the booking clerk. DHB2 advised that an urgent tag was not added to the referral.

20. Initially, Mr A's CT appointment was made for 5 April 2019. However, DHB2 advised that there was a machine failure, which resulted in Mr A's appointment being postponed to 6 April 2019 — two days prior to his surgery.

21. Following Mr A's CT scan, the images were loaded onto DHB2's picture archiving system (PACS) and sent to DHB1. DHB2 advised that for the region it is standard practice to send images digitally and for the reports to be reviewed separately via the shared electronic record depository (Éclair).

22. DHB2 advised that the radiologist on duty over the weekend did not pick up that the imaging needed to be reported on, likely because it was not tagged as urgent and appeared on the radiology information system as a routine outpatient scan.

23. DHB2 advised that the primary responsibility of the on-duty radiologist over the weekend is to pick up urgent referrals from the Emergency Departments (EDs) or wards. DHB2 said that

[4] Chronic kidney disease, heart disease, and high blood pressure. The cardiovascular effects of anaesthesia can be more serious in patients with heart disease and high blood pressure. Kidney disease can affect the body's processing of anaesthesia.

[5] The last CT scan had been undertaken in December 2018. The last CT scan that included the chest had been undertaken in March 2018.

[6] A doctor who specialises in diseases of the liver and related conditions.

often at this time, CT liver images were left to be reported on by a radiologist who specialised in abdominal CT scans.

24. The images were not reviewed by a radiologist when received by DHB1. DHB1 advised that imaging is transferred by a direct electronic mechanism to a radiology library known as PACS. The process is the same whether or not the images are accompanied by a radiology report.

25. At the time of these events, DHB1 did not have a policy, protocol, or guideline that informed clinicians that any imaging that had not been reviewed by MDM, or reported on by a radiologist, had to be reviewed by, or in conjunction with, a radiologist prior to surgery.

26. The images were reviewed by Dr C on 8 April 2019 — the morning of Mr A's surgery. Dr C concluded that a liver resection was still feasible. However, the imaging showed small lung nodules, indicating that the cancer had metastasised (spread). This was not identified by Dr C.

27. Dr C told ACC that had the lung metastases been recognised prior to surgery, the operation would not have proceeded.

**Subsequent events**

28. On 8 April 2019, Mr A underwent surgery as planned, to remove a portion of his liver. The resection was completed in approximately three hours, and there were no significant technical or anaesthetic complications.

29. The CT scan undertaken at DHB2 on 6 April 2019 was reported on by a DHB2 radiologist on 9 April 2019. It identified the lung nodules. Subsequently, Mr A was diagnosed with prostate cancer, with lung metastases.

30. Sadly, Mr A passed away in 2020.

**Further information**

*DHB2*

31. DHB2 acknowledged that the referral form requested that the CT scan be performed urgently because surgery was scheduled for 8 April 2019. In response to the provisional opinion, DHB2 advised that the target reporting time at DHB2 for a scan of this nature would be within one working day. DHB2 told HDC that the urgency regarding the CT scan was related to a delay in requesting follow-up imaging, rather than Mr A having a clinically urgent situation. DHB2 said that this is a different scenario than an inpatient requiring urgent imaging, in which the team would request an urgent review via the duty radiologist. It noted that the CT request was submitted on 4 April 2019 and the CT performed on 6 April 2019.

*DHB1*

<u>Preoperative request for imaging</u>

32. DHB1 told HDC that in general, standard investigations to exclude metastatic disease prior to resection are CT scanning of the chest, abdomen, and pelvis at the time of the decision to carry out a resection. DHB1 said that in most cases, these investigations would be

repeated prior to resection if more than three months had elapsed between the date of the CT scan and the date of surgery. DHB1 advised that it does not have documented local guidelines for HCC treatment.

33. DHB1 told HDC that in Mr A's case, although he had had a recent CT scan (in December 2018) at the time of the MDM in January 2019, this did not include the chest, and it is impossible to know whether or not a CT chest scan at that stage would have shown lung metastases. DHB1 noted that Mr A had been under the care of the HCC MDM since March 2017, and had undergone nine CT scans — five of which included the chest. The last CT scan to include the chest was undertaken in March 2018.

Delay in surgery

34. DHB1 told HDC that it aims to meet the Ministry of Health's faster cancer treatment targets.[7] However, in Mr A's case, the time elapsed from the MDM decision to consider resection to the date of Mr A's surgery was 90 days.

35. DHB1 said that after a decision to consider surgery is made, many patients require further tests and clinic appointments to confirm their fitness for resection prior to the surgery being carried out. It stated that this was the main factor that caused the delay in Mr A's surgery.

36. DHB1 said that because of Mr A's history of heart disease, he required cardiology assessments prior to the anaesthetic assessment, which were undertaken on 18 February 2019, 19 February 2019, and 20 February 2019. DHB1 highlighted that this assessment was undertaken by Mr A's domicile DHB, and the timing of it was out of DHB1's control.

37. DHB1 advised that it is within the remit of the coordinator to ensure that investigations are completed before surgery, and it is the clinical team that determines what those investigations are.

Review of preoperative imaging

38. DHB1 told HDC that Dr C agreed to take Mr A's case five days before surgery, and reviewed the file at the time. DHB1 noted that generally surgeons review details of cases allocated to their lists a week or two, or more, before surgery.

39. DHB1 told Ms B:

> "The responsibility of ensuring that the cancer could still be removed from [Mr A's] liver fell to [Dr C] … He reviewed the CT scan and, whilst looking at the liver cancer, regrettably did not notice the small lung nodules. This was clearly an oversight and we unreservedly apologise that we did not have the CT scan reviewed by one of the [DHB1] radiologists …"

[7] The Ministry of Health's faster cancer treatment targets state that patients referred urgently with a high suspicion of cancer receive their first treatment (or other management) within 62 days of the referral being received.

40. A staff member at DHB1 reviewed the care provided to Mr A. He noted:

> "Understandably, [Dr C] was focused solely on the liver lesion itself as there had never been, on any previous imaging, any suggestion that there might be metastases present outside of the liver."

41. Dr C told ACC that the new imaging was requested because of the three-month delay in Mr A having surgery, as it was necessary to see whether the liver lesion had grown significantly in this period, and whether Mr A was still suitable for surgery.

42. Dr C told ACC that the software for viewing imaging that is available to clinicians in their offices and wards is less sophisticated than that used by radiologists for reporting. He said that in this case, the imaging was not received with appropriate preset "lung windows", meaning a series of pictures with a range of shades of grey adapted for seeing lung lesions. Dr C said that the software available to clinicians has a limited ability to change the preset window on a series of images.

*Ministry of Health faster cancer treatment indicators*

43. The Ministry of Health faster cancer treatment indicators are as follows:

> "*31 day indicator — patients with a confirmed cancer diagnosis receive their first cancer treatment (or other management) within 31 days of a decision to treat*
>
> *62 day indicator — patients referred urgently with a high suspicion of cancer receive their first treatment (or other management) within 62 days of the referral being received by the hospital."*

**Responses to provisional opinion**

*Ms B*

44. Ms B was given the opportunity to comment on the "information gathered" section of the provisional opinion. She told HDC that her father made an effort to get the best care possible for himself but "fell through what seem to be institutionalized gaps in our health care system". She said that the overlooked scan results of the lung lesions and abdominal mass were the "final act in a litany of oversights that resulted in an unnecessary surgery", and that he was in a vulnerable position and put implicit trust in his health providers.

*DHB1*

45. DHB1 was provided with an opportunity to comment on the provisional opinion, and it confirmed that both Dr C and Dr E were provided with a copy of the report and offered the opportunity to comment.

46. DHB1 responded that the Ministry of Health's Fast Cancer Treatment Guidelines do not apply in this clinical setting, as the targets apply to a patient's first treatment for cancer, and Mr A had received his initial cancer treatment in 2017 and remained under surveillance to monitor the response. Mr A had partially responded to embolisation procedures, and surgery was a recommended follow-up to this response. DHB1 stated that the 62-day target is the target timeframe from the time of referral of a patient with a high suspicion of cancer

to the date on which the patient receives their first cancer treatment. DHB1 said that as Mr A had relapsed and was receiving further treatment, the target therefore does not apply.

*DHB2*

47. DHB2 was provided with an opportunity to comment on the provisional opinion, and its comments have been incorporated into this report where relevant.

## Introduction

48. This report highlights the importance of group providers having robust policies and processes in place to ensure the quality provision of services.

49. In this case, a series of process failures on the part of the services caring for Mr A resulted in metastatic cancer in his lungs not being identified prior to undergoing surgery on his liver, and to subsequent delays in Mr A receiving palliative care.

## Opinion: DHB1 — breach

### Preoperative imaging

50. In January 2019, it was determined by the DHB1 MDM that an appropriate course of treatment for Mr A was liver resection. Mr A's last CT scan was undertaken in December 2018, but the last scan to include his chest was undertaken in March 2018.

51. Following the MDM, Mr A was reviewed by Dr E and determined to be an appropriate candidate for surgery, pending anaesthetic assessment. Mr A underwent cardiology assessment at his domicile DHB in anticipation of anaesthetic assessment. The anaesthetic assessment was undertaken on 14 March 2019, and Mr A was deemed suitable for surgery.

52. The HCC coordinator identified that Mr A had had a relatively long wait for surgery. The HCC coordinator noted that Mr A had completed all required investigations and assessments and had been cleared for surgery.

53. DHB1 advised that the standard investigations to exclude metastatic disease prior to resection are CT scanning of the chest, abdomen, and pelvis at the time of the decision to carry out a resection. DHB1 advised that in most cases, these investigations would be repeated prior to resection if more than three months had elapsed between the time of last imaging and the date of surgery. It noted that while coordinators are required to ensure that investigations and assessments have been completed, it is for the clinical team to determine the specific investigations that are required.

54. At the time of the MDM review, and the subsequent review with Dr E, it had been approximately 10 months since Mr A had last had a CT scan that had included his chest. It appears that neither the MDM nor Dr E recognised the need for this to occur in order to assess Mr A's suitability for surgery. However, I note that DHB1 does not have documented guidelines for clinicians to follow when determining suitability for HCC surgery.

55. I appreciate that multiple factors caused the delay in Mr A having surgery. However, at the time of the MDM discussion, in which liver resection was the proposed course of treatment, and at the time of Dr E's review of Mr A, more than three months had passed since Mr A had last had a CT scan that had included his chest, and as such, there was an outstanding need for Mr A to have a chest scan as part of the preoperative work-up.

56. It is concerning that the need for Mr A to have a chest scan was not identified before he was allocated to Dr C's surgical list. However, because of the multiple clinicians involved throughout the MDM and preoperative processes, I consider that this cannot be attributed to one clinician. I therefore consider it to be a systems failure, contributed to by DHB1's lack of guidelines for HCC clinician decision-making. I acknowledge that once Mr A's need for a chest scan was identified, an urgent CT referral was made to DHB2, and that the referral form noted that urgency was required because Mr A was scheduled to have surgery on 8 April 2019.

**Preoperative imaging review**

57. On 6 April 2019, CT imaging was undertaken at DHB2 and the images were transferred to DHB1. The imaging was not accompanied by a radiology report.

58. On 8 April 2019, the day of Mr A's surgery, Dr C reviewed Mr A's imaging and concluded that liver resection was feasible. However, Dr C did not identify the presence of lung metastases on the imaging.

59. I note DHB1's statement that the responsibility for ensuring that Mr A's liver resection could proceed fell to Dr C. However, this statement fails to acknowledge that neither the participants of the MDM, Dr E, nor any other DHB1 staff identified that Mr A required CT chest imaging before his surgery, prior to Dr C noting this when he was allocated Mr A's case five days preoperatively. Additionally, DHB1 did not have in place any policies, protocols, or guidelines that would suggest that clinicians did need to obtain radiology review before proceeding with surgery for cancer.

60. While it was unfortunate that Dr C did not identify the lung metastases before surgery, I would not expect Dr C to detect this while reviewing preoperative imaging, as he is not a specialist radiologist. It is concerning that DHB1's system allowed for Mr A's surgery to proceed without his CT scan having been reported on by a radiologist, reviewed in conjunction with a radiologist, or reviewed in an MDM setting.

**Conclusion**

61. DHB1 has acknowledged that if the metastases in Mr A's lungs had been identified, the surgery would not have gone ahead. I consider that DHB1 failed to provide services to Mr

A with reasonable care and skill, because owing to a series of failures the metastases were not identified prior to the surgery taking place. In summary, the need for CT chest imaging was not identified until five days preoperatively; DHB1 did not have in place a system to ensure that the CT scan was reported on by a radiologist prior to surgery; and DHB1 did not have in place a policy, protocol, or guideline to guide Dr C's actions appropriately when he received imaging that had not been reported on. Accordingly, I find that DHB1 breached Right 4(1) of the Code of Health and Disability Services Consumers' Rights.[8]

## Opinion: DHB2 — adverse comment

62. On 4 April 2019, DHB2 received a request for urgent CT imaging for Mr A. The referral form noted that urgency was required because Mr A was scheduled to have surgery on Monday 8 April 2019. DHB2 advised HDC that the target reporting time for a scan such as Mr A's would be within one working day. Initially, Mr A's CT appointment was made for 5 April 2019, but this was postponed until 6 April 2019 due to a machine failure. I am critical that in Mr A's case, despite being advised that the CT scan was urgent, owing to lapses in DHB2's processes, the CT scan was not reported on until 9 April 2019.

63. The referral was hand-delivered to the duty radiologist, who in an effort to expedite the referral took it directly to the bookings clerk. The referral skipped the normal process in which the triage priority result would be added, and accordingly an urgent tag was not added to the referral.

64. CT imaging was carried out on 6 April 2019, and the images were forwarded to DHB1. The images were not accompanied by a report.

65. DHB2 advised that the radiologist on duty did not identify that the imaging needed to be reported on, likely because it was not tagged as urgent and it appeared in the system as a routine outpatient scan.

66. I appreciate that the duty radiologist attempted to expedite the referral, and that DHB2 acted promptly to ensure that the imaging was undertaken. However, the process failed to identify that the request should have been tagged appropriately and reported on urgently. This situation resulted in Mr A's CT scan not being read by a radiologist until 9 April 2019, and was a significant contributing factor to Mr A's metastatic lung disease not being identified until after the surgery had taken place.

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

## Opinion: Dr C — other comment

67. Dr C first became involved in Mr A's care on 3 April 2019, when Mr A was placed on Dr C's surgical list for 8 April 2019. At this time, Dr C noted that imaging had not been completed for several months, and it was arranged through Mr A's domicile DHB, DHB2. The images were not reported on urgently at DHB2, or at DHB1, for the reasons outlined above. The imaging was reviewed by Dr C on the day of surgery — 8 April 2019 — and Dr C noted that the liver resection was still feasible, as he did not identify the lung metastases that were present.

68. I acknowledge Dr C's role in confirming Mr A's eligibility for surgery. However, I consider that the systemic issues that occurred at DHB1 and DHB2 prior to the surgery resulted in Mr A's surgery proceeding unnecessarily. It is clear that had DHB1 or DHB2 reported that the imaging showed lung metastases prior to Dr C's review of the imaging on 8 April 2019, the surgery would not have proceeded. As such, I do not consider it appropriate to be critical of the care Dr C provided.

## Changes made

69. DHB1 said that following this event, all surgeons in the HCC service were instructed that any imaging that had not been reviewed in the HCC MDM, or separately reported on by a radiologist, should be reviewed in conjunction with a radiologist and the outcome of the review documented, prior to proceeding with surgery.

70. DHB1 said that in the longer term, it is anticipated that a formal organisation-wide policy will be developed to ensure that such a process is followed for all patients who are to proceed to cancer surgery.

71. DHB2 advised that its Radiology Department has now implemented a text-based messaging system in which the requirements for urgent reports can be communicated quickly.

## Recommendations

72. I recommend that DHB1:

a) Provide Mr A's family with a written apology for the breach of the Code outlined in this report. The apology is to be provided to HDC within three weeks of the date of this report, for forwarding to Mr A's family.

b) Create and implement a policy that states that in the context of patients with cancer, any imaging that has not been reviewed by an MDM or reported on by a radiologist should be either reported on, or reviewed in conjunction with a radiologist, and

documented prior to surgery. A copy of the policy is to be provided to HDC within six months of the date of this report.

c) Create and implement a guideline for the HCC MDM and clinicians that outlines the preoperative investigations that should be considered before HCC surgery. The guideline should outline the acceptable maximum time to have elapsed between the preoperative investigation and the date of surgery. A copy of the guideline is to be provided to HDC within six months of the date of this report.

d) Create and implement a safeguard to work in conjunction with the guideline mentioned above, to ensure that appropriate actions occur when the maximum time to have elapsed has passed. Evidence of this is to be provided to HDC within six months of the date of this report.

73. I recommend that DHB2:

a) Provide Mr A's family with a written apology for the deficiencies identified above. The apology is to be provided to HDC within three weeks of the date of this report, for forwarding to Mr A's family.

b) Report back to HDC on the efficacy of the text-based messaging system outlined in paragraph 71, within four weeks of the date of this report.

## Follow-up actions

74. A copy of this report with details identifying the parties removed will be sent to the Health Quality & Safety Commission, the Ministry of Health, and Technical Advisory Services, and placed on the Health and Disability Commissioner website, www.hdc.org.nz, for educational purposes.