

# **Hawke's Bay District Health Board**

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

**(Case 18HDC00858)**



Health and Disability Commissioner  
*Te Toihou Hauora, Hauātanga*



## Contents

Executive summary .....	1
Complaint and investigation .....	1
Information gathered during investigation.....	2
Opinion: Hawke’s Bay District Health Board — breach .....	11
Opinion: Dr C — adverse comment.....	13
Opinion: Medical centre — other comment .....	14
Recommendations.....	15
Follow-up actions .....	15
Appendix A: Independent advice to the Commissioner .....	16
Appendix B: Independent advice to the Commissioner.....	22
Appendix C: In-house advice to the Commissioner .....	27



## Executive summary

1. This report concerns the care provided by Hawke’s Bay District Health Board (HBDHB) to a man between 2016 and 2017 after he underwent a CT scan that revealed several concerning findings including possible malignancy. However, an IT issue meant that the radiologist’s scan report was not made available on the electronic clinical application (ECA) system used by clinicians, and clinicians were also not aware that they could view the report on the radiology information system (RIS). The man’s scan report was first seen by a clinician over a year later, and he was diagnosed with metastatic adenocarcinoma (cancer) shortly afterwards. Sadly, the man passed away.
2. The Commissioner said that notwithstanding HBDHB’s system failure that caused the scan report to be unavailable for over a year, the standard of the scan report itself also fell below the ideal standard of care, as it did not report on the finding of the mediastinal pleural thickening, the significance or otherwise of the man’s lymphadenopathy, and the possible malignant diagnosis for right pleural effusion.
3. HBDHB was found in breach of Right 4(1) of the Code for multiple failures in its system, which meant that the man’s treating clinicians were unable to view his CT scan report for over a year, and affected the timeliness of treatment provided. The Commissioner was also critical of the radiologist for the standard of his CT scan report.
4. The Commissioner recommended that HBDHB provide a written apology to the man’s wife, update HDC on the implementation and effectiveness of its new “Clinical Portal”, and conduct a review of waiting times to access its Cardiology and Rheumatology clinics.

## Complaint and investigation

5. The Commissioner received a complaint from Mrs A about the services provided to her husband, Mr A, by Hawke’s Bay District Health Board. The following issues were identified for investigation:
  - *Whether Hawke’s Bay District Health Board provided Mr A with an appropriate standard of care in 2016–2017.*
6. The parties directly involved in the investigation were:
 

Mrs A	Complainant/consumer’s wife
HBDHB	Provider
7. Further information was received from:
 

Dr B	Provider/rheumatologist
Dr C	Provider/radiologist

Dr D	Provider/cardiologist
Dr E	Provider/cardiologist
Dr F	Provider/medical registrar
Medical centre	

8. Also mentioned in this report:

Dr G	Radiologist
------	-------------

9. Independent expert advice was obtained from a rheumatologist, Dr Andrew Harrison (**Appendix A**), a radiologist, Dr David Milne (**Appendix B**), and in-house clinical advisor Dr David Maplesden (**Appendix C**).

---

## Information gathered during investigation

### Introduction

*Mr A*

10. Mr A, aged in his seventies, underwent a CT scan in Month3<sup>1</sup> to investigate concerns of possible interstitial lung disease (ILD).<sup>2</sup> Mr A's medical history included atrial fibrillation and rheumatoid arthritis.

11. Although the CT scan showed no evidence of ILD, it demonstrated some concerning features, including mediastinal lymphadenopathy (ML)<sup>3</sup> and pleural effusion.<sup>4</sup> Unfortunately, the scan report was not made available on HBDHB's electronic clinical application (ECA) until Month16. As a result, its findings remained unknown to HBDHB staff involved in Mr A's care. In Month16, Mr A had a further CT scan and biopsy, which confirmed a diagnosis of metastatic adenocarcinoma (cancer). Sadly, Mr A passed away a few months later.

### HBDHB process for reviewing scan results

12. At the time of these events, radiology scan results at HBDHB could generally be viewed by staff via ECA, the radiology information system (RIS), and by paper copy, which clinicians usually received once radiology reports had been signed off. Individual clinicians have responsibility for following up on the results of scans they request.

13. HBDHB's process for providing results to clinicians begins when the radiologist completes the radiology report and signs it off. This triggers the automatic release of reports from RIS to:

---

<sup>1</sup> Relevant months are referred to as Months 1–16 to protect privacy.

<sup>2</sup> ILD is an umbrella term for a large group of lung diseases that cause scarring of lung tissue.

<sup>3</sup> Mediastinal refers to the space in the chest between the lungs that contains the heart, oesophagus, trachea, and lymph nodes. Lymphadenopathy is an abnormal enlargement of the lymph nodes.

<sup>4</sup> Pleural effusion is a build-up of fluid between the lung and chest wall membranes.

- 1) ECA — the primary portal to acknowledge and sign off reports. When reports arrive in ECA, initially they appear in the “unread results” folder. If a radiology report fails to leave RIS or reach ECA, RIS receives an error message.
  - 2) The patient’s GP — RIS auto-populates the patient’s GP from ECA, which determines to whom and where results are sent. The sending of results to the GP occurs automatically and electronically.
  - 3) The Radiology Department printer — the report is printed in the Radiology Department, then the receptionist or medical imaging technologist collects and sorts the paper copies to internal mail baskets for distribution the following day.
14. Once the report recipient (the referrer) has marked results as “read”, a secretary sends the results to Health Records for filing.
  15. HBDHB’s policy for “Clinical Management of Test Results” states that results should be viewed electronically in ECA and then marked as read. A named senior medical officer (SMO) is responsible for maintaining an overview of unread results, and while the responsibility for reviewing results can be delegated, the SMO maintains responsibility for the overall management of the patient.

#### **Rheumatology care and CT scan**

16. On 9 Month2, Mr A was reviewed by HBDHB rheumatologist Dr B following concerning findings four weeks earlier. Dr B had seen Mr A at the Acute Medical Service owing to breathlessness, and a chest examination had revealed inspiratory crackling in his lungs, an enlarged heart, and an increase in interstitial markings. Dr B stated that at the review on 9 Month2, Mr A still had crackles in his lungs, and a poorly controlled heart rate of 130–140bpm.<sup>5</sup> Dr B considered ILD and heart disease as possible causes. Dr B sent a referral to Cardiology for follow-up, and ordered a high resolution CT (HRCT) chest scan to investigate possible ILD. He stated that he planned to review Mr A again in three months’ time. Mr A was later booked to visit the Cardiology clinic on 4 Month5.
17. Dr B’s CT scan request to Radiology stated:
 

“Known seronegative [rheumatoid arthritis]. ... Admitted with presumed pneumonia Month1. Resolving but showers of bibasal crackles. ILD?”
18. Mr A’s CT scan was performed by radiologist Dr C on 18 Month3. Dr C reported his findings as follows:
 

“There is evidence of right pleural effusion extending into the transverse fissure. Evidence of fine honeycombing changes in the subpleural region of the upper lobes. Changes of mild COPD in the form of emphysematous changes seen in the upper lobes with paraseptal bullae are seen.

There is thin septal line thickening in both bases

---

<sup>5</sup> Beats per minute.

Evidence of marked cardiomegaly<sup>6</sup> of left ventricular character.

Evidence of mediastinal lymphadenopathy involving the anterior mediastinum and the paratracheal region with the largest node measuring 18mm in shortest axis.

The changes are more consistent with mild pulmonary congestion. There are no signs of any significant interstitial lung disease of the present stage.”

19. In relation to the CT scan report, HBDHB told HDC:

“The report describes the findings of the cardiomegaly, right-sided pleural effusion, mediastinal and hilar lymphadenopathy and interstitial changes with subpleural fine honeycombing, bullae and emphysematous changes. The report does provide a conclusion regarding the question of interstitial lung disease that findings ... more likely represent a degree of mild pulmonary congestion and that there is no significant interstitial lung disease. There are no further recommendations regarding follow-up imaging or differential diagnosis of the findings not related to the clinical question e.g. pleural effusion and mediastinal lymphadenopathy.”

20. HBDHB stated that the differential diagnosis for ML would include tuberculosis and malignancy, and that pleural effusion also has a wide range of differential diagnoses including heart failure or “malignancy related”. HBDHB said that ideally these differential diagnoses of the additional findings would have been recorded along with a recommendation for respiratory review or follow-up scan, but noted:

“[T]his scan was requested from a Hospital physician and ... there would be the assumption a specialist physician knows the differential diagnosis and workup of mediastinal lymphadenopathy and pleural effusion.”

21. Dr C told HDC:

“It is of high importance in our job to finalize any radiological report to take the clinical context at the end into consideration trying to link the possibility of the findings with the clinical issue in question and as you can see I took all the relevant clinical finding[s] of the patient ... recent pneumonia, the recent atrial fibrillation, the history of rheumatoid arthritis and the enlarged left ventricle of the heart to reach the diagnosis of heart failure.”

22. He further stated:

“The question of mediastinal lymphadenopathy which I mentioned ... should be taken further in consideration and an initial standard post enhanced CT scan of the chest should [be] done for clarification however in the absence of previous scans and no clinical information ... regarding the issue of malignancy on the clinical request it was not stressed enough for the referring physician to take further action as they could be reactive and the differential diagnosis is wide.”

---

<sup>6</sup> Enlargement of the heart.



23. Subsequently, Mr A's CT scan report was made available on RIS, but it was not made available on ECA — the primary point where its clinicians typically reviewed such reports — and was marked "pending" until over a year later. (This issue is discussed in more detail below.)
24. Dr B did not receive a paper copy of Mr A's scan report. HBDHB told HDC that it was able to identify that the RIS system initiated a printed copy of the report, but it could not identify the reason for the process failure after this point. In relation to paper copies of scan results, Dr B stated:

"I know some clinicians use the paper report only, but I use the paper report as a second-tier safety net for reviewing results. I did not receive a paper report of [Mr A's] CT result in this case."

25. Mr A's medical centre also received an electronic copy of the scan report via Healthlink, but the report was not sent to an individual GP, and it is not known whether a doctor reviewed the report. This occurred because HBDHB had a generic code for the medical centre, and is why the report was sent to the practice rather than an individual doctor. The medical centre told HDC that its inbox record for the scan result was last updated on 28 Month3 by a GP. Although the GP cannot recall this particular event, he believes he would have filed it with the knowledge that the scan had been ordered by a specialist who was planning further investigation and follow-up. The medical centre further stated that there was no request for the GP to follow up the CT scan.

#### **Further care and pending scan result on ECA**

26. On 21 Month4, while overseas, Mr A was hospitalised owing to decompensated heart failure. He was treated with atrioventricular node ablation, and an implantation of a bi-ventricular pacemaker and defibrillator for cardiac resynchronisation. HBDHB stated that on 29 Month4 it was informed that Mr A had become unwell and would be returning to New Zealand in about two weeks' time. Mr A thus missed his Cardiology appointment, which had been scheduled for 4 Month5.
27. Dr B reviewed Mr A again on 22 Month5. Dr B stated that Mr A explained that he had developed heart failure while overseas and had received treatment there (as outlined above). Dr B noted that Mr A's breathing had improved, and that it therefore seemed likely that the crackles in his lungs were related to heart failure, not ILD. Dr B told HDC that his suspicion for ILD dropped significantly following this review, and he referred Mr A for a Cardiology review again. He also recorded the plan to see Mr A again in the Rheumatology clinic in four months' time.<sup>7</sup>
28. At the same review, Dr B checked the ECA for Mr A's CT scan report, but it was marked as pending. He felt that this was either because Dr C had not yet typed the report, or had not reported the scan. Dr B told HDC that he was not aware at the time that the report could be available on RIS, and that the only system he knew of for electronic sign-off was the

---

<sup>7</sup> The planned Rheumatology review in four months' time did not take place.

ECA. Dr B further stated that the ECA system does not use alerts or reminders, and that although he reviews his patient results in ECA daily, he is reliant on receiving those results to do so.

29. Dr B told HDC:

“The reason I did not follow up [Mr A’s] Report after noting it was pending around 8 weeks after the scan was done was this was a non-urgent scan looking for interstitial lung disease, and I had no suspicion of a malignant process. ... At that time clinicians were experiencing delays in reporting due to a reduced radiological man power, and reports were often delayed for some weeks.”

30. Cardiologist Dr E reviewed Mr A three times between 13 Month7 and 1 Month9. Dr E planned to see Mr A again two months after the last appointment, but that did not eventuate. Dr E told HDC that during the three appointments, “there were no overt symptoms to suggest the presence of an underlying malignant (cancer) process”, and he was not aware at that time that an HRCT scan had been performed, and so did not check for scan results.

31. On 15 Month15, Mr A was reviewed by cardiologist Dr D in his private rooms. HBDHB indicated that this was because a Cardiology review could not be arranged in the public system in the time frame Mr A required. In response to my provisional opinion, Mrs A said that the review occurred because she had “insisted that this happen” as Mr A had not had a follow-up Cardiology review since 2016, he had been experiencing fatigue and breathlessness since Month10, and she was concerned about a possible ongoing heart issue. At the consultation on 15 Month15, Mr A complained of shortness of breath with minimal exertion. Dr D attempted to view the CT scan report on ECA, but the report was still marked as pending, and he could not access it.<sup>8</sup> He planned to undertake a chest scan and echocardiogram (Echo).

32. Two days later, Mr A had an Echo performed. In the Echo report, Dr D noted:

“Complete recovery of [left ventricular] size and function following [cardiac resynchronisation therapy] and medical treatment. It is likely that there is an alternative medical explanation for his shortness of breath.”

33. On 28 Month15, a GP reviewed Mr A because he was complaining of pain on the left base of his neck, which the GP noted was “diffusely swollen”. The next day, Mr A found a lump in his neck, and went to see the GP again. The GP documented that there seemed to be “5–10” lumps that were moderately sore, and he referred Mr A to the Acute Assessment Unit (AAU) at HBDHB for follow-up.

34. On 30 Month15, Mr A presented to the AAU and was seen by Dr F. In the discharge summary for that day, Dr F noted:

---

<sup>8</sup> However, Dr D’s notes from a later consultation on 6 Month16, as described at paragraph 35 of this report, indicate that he did manage to access the CT scan report through RIS.

“CT neck/chest/abdo/pelvis to be done as an outpatient. ... CT being expedited given long smoking history and presence of hilar lymphadenopathy on previous CT imaging, in addition to new symptoms of breathlessness. [Dr D] had ordered a CT chest when he saw the patient in clinic 2 weeks ago, to investigate similar, but it had not yet been completed.”

35. Dr F recorded his plan for Mr A to be seen again by Dr D in his private rooms, and that a CT scan was to occur within two weeks. Dr F told HDC:

“The differential for pain[ful] cervical lymph nodes includes malignancy, and from the discharge summary I completed on 30 [Month15] it is clear that this was thought about and initial investigations undertaken. ... A CT chest scan had been ordered by [Dr D] two weeks prior to my first contact. I noted this had not been completed ... I therefore expedited this and arranged for an urgent outpatient CT chest/abdomen/pelvis ... I then phoned [Dr D] ... to inform him that I had undertaken this step, so that he would be aware to look out for and review the result when he saw the patient in an upcoming private clinic consultation.”

36. On 6 Month16, Dr D reviewed Mr A again and attempted to view Mr A’s CT result marked pending on ECA, but he could not access it. Dr D noted:

“[T]he finding of supraclavicular lymph nodes was reconfirmed today and I note that the planned high resolution CT chest has been cancelled and replaced by a whole body CT scan. ... When I saw [Mr A] on 15 [Month15], I reviewed all available investigations and noted the high resolution CT chest that has been undertaken in [Month3] and that significant mediastinal lymphadenopathy with nodes of up to 1.8 centimetres had been reported. This may well have some significance on the current findings of palpable lymphadenopathy.”

37. HBDHB stated that it appears from Dr D’s clinical notes at this review that he must have viewed Mr A’s CT scan report from Month3 via RIS.
38. Following that appointment, Dr D notified Dr B of the results of the Month3 CT scan. Dr B subsequently tried to access the report on ECA, but was not able to, as it was still marked as pending. Dr B then alerted HBDHB, and he told HDC that at a review on 10 Month16 he informed Mr A and Mrs A that the CT scan from Month3 was abnormal and that he had not received the report.
39. On 11 Month16, Dr B again attempted to access the scan report via ECA, but it was still marked as pending.
40. On 13 Month16, HBDHB marked the CT scan report on ECA as “authorised”, which allowed clinicians to access it on that system.
41. On 17 Month16, Mr A underwent a further CT scan, which indicated metastatic malignancy. Subsequently, Mr A underwent a biopsy of a lymph node, which confirmed

metastatic adenocarcinoma with likely lung origin. Mr A passed away at his home a few months later.

### **Further information**

42. HBDHB's Adverse Event Review (AER) found that there were insufficient systems in place to ensure that scan results could be obtained, tracked, and recorded by clinicians easily. Its review identified the following:
- 1) The primary reason for the delay in clinician review of Mr A's Month3 CT scan report was that it was not made available on the ECA system used by clinicians, owing to an IT problem that was unknown at the time.
  - 2) A lack of DHB-wide agreed process for reviewing outstanding test results.
  - 3) A paper copy of the report did not reach the clinician who ordered the scan.
  - 4) Multiple clinicians who attempted to view the scan report on ECA appeared to be unaware that the report was accessible via RIS.
  - 5) A lack of a defined system for ensuring follow-up of a pending result. Several clinicians did not investigate why the scan result was still pending, despite recognising that it was delayed.
  - 6) An electronic copy of the scan result was sent only to the generic practice account of the medical centre (not to a named GP), and Mr A's GP did not receive the result.
  - 7) This adverse event was first highlighted in Month16, but the Adverse Event Report was completed only in June 2018, with inadequate communication with the family and clinicians involved.
  - 8) There was a delay with planned follow-up appointments and in accessing Cardiology and Rheumatology clinics.
43. In relation to the IT problem that led to the delay in clinician review of Mr A's Month3 scan report, HBDHB told HDC:
- "If a radiology report fails to leave the Radiology Information System (RIS) when being transferred to the DHB's Electronic Clinical Application (ECA), an error message is received in RIS. In this particular case there was no alert that the radiology report had not been sent through to [ECA]."
44. HBDHB investigated the IT issue further and found that the result had in fact been messaged from RIS to ECA, but did not load into the clinical data repository, so was not visible on screen. HBDHB told HDC: "[Dr B] would not have been able to see the result in ECA nor would it have gone into his 'Unmarked as Read' list." HBDHB found that the only difference between this result and any other standard result was that the file type showed as a "0" in the file log.

45. In relation to the standard of Dr C's report, HBDHB submitted that it addressed the clinical question of ILD adequately.
46. Dr C told HDC that in his view, reviewing the CT scan after the event is "completely different from the actual day to day reporting as we don't have the luxury of seeing every subtle changes as the reviewers have".
47. Dr C stated that he acknowledges that the issue of ML should have been taken more seriously. He noted that on this occasion, the failure for the report to be issued to the referrer owing to an HBDHB IT problem, and the lack of meetings between specialists in Radiology, Cardiology, and Rheumatology, led to a delay in the management of Mr A's care.
48. Dr E told HDC that the reason Mr A's planned follow-up appointment two months after his Cardiology review on 1 Month9 did not happen was because of the "very large number of clinic referrals and long waiting list (six months) for echocardiography. He was however seen by a technician in our pacemaker clinic on 23 [Month11], and 22 [Month14] for a routine pacemaker check."
49. Dr C is not currently practising in New Zealand.

*Changes made since these events*

50. HBDHB stated that the IT error that resulted in the CT scan report not being made available on ECA at the time of completion has been identified and an automatic monitoring process put in place to ensure that it does not happen again. HBDHB told HDC:

"This process effectively looks for result log files where the size = 0, and then emails the [Picture Archiving and Communication System] list for follow-up and checking. There is no mechanism for ECA to message back to RIS to confirm if a result has been received or not, hence the introduction of the above automatic monitoring process."
51. HBDHB said that a new clinical system known as Clinical Portal is in the process of being introduced, which it anticipates will make accessing and viewing radiology reports easier. HBDHB stated: "Under this new system a bold number (indicating that results have not been looked at) beside the result folder will make it obvious that there are results to read." HBDHB told HDC that implementation of the Clinical Portal was scheduled for August 2019.
52. In Month5, HBDHB implemented a radiology system "Queue Manager" procedure for identifying and resolving error messages on RIS.<sup>9</sup> HBDHB also has a procedure in place for clinicians' "Daily Tasks" on RIS to ensure proper functioning of that system.
53. HBDHB further stated that it had completed a review of its systems for governance of clinical results and updated the DHB's Clinical Governance of Investigation Results Policy.

---

<sup>9</sup> HBDHB reviewed this procedure in January 2019.

54. In relation to the scan report that it sent to the medical centre, HBDHB said:

“The RIS picks up the patient’s GP from ECA and this populates the physician tab in RIS – this determines where results are sent. ... [In] 2016, Hawke’s Bay DHB had a generic code for [the medical centre]. This was picked up as the patient’s ‘GP’ code in RIS and explains why the message was sent to the practice rather than an individual doctor.”

55. HBDHB stated that as a result of these events, it has worked with the region’s primary health organisation to ensure that individual GPs receive patient results, and is undertaking an ongoing audit in relation to this matter. It further stated:

“We have also made a change to our system which means that the GP field must be populated with an individual’s name. If the patient does not know who their GP is, both GP and Practice fields are populated as ‘Unknown’ until a GP is identified ... If we do not have a GP name on record the results will go to the person who made the referral.”

56. HBDHB stated that it has also completed a review of its AER process, resourcing available for AERs, and how it liaises with families during such event reviews.

57. Dr B told HDC that he has reflected on the care he provided to Mr A, and now checks the RIS for reports that are marked as pending on the ECA.

### **Responses to provisional opinion**

58. Mrs A, HBDHB, and Dr C were given the opportunity to response to relevant sections of my provisional opinion. Their comments have been noted in the report where relevant.

59. Mrs A told HDC: “Had the report of the CT scan in [Month3] been available to the doctors, and appropriate treatment commenced, [Mr A] may have either lived longer or been successfully treated.” She said that instead, by the time Mr A was diagnosed with cancer in Month16, the cancer had metastasised and “fractured his L5 vertebra<sup>10</sup>”, which caused him “incredible” pain.

60. HBDHB accepted the provisional opinion.

61. Dr C stated that the IT-related delay in Mr A’s CT scan report being made available to the referring physician was not within his control. He told HDC that the actions of Dr B not to follow up on the report after requesting the CT scan was also outside of his control, and that timely follow-up would likely have affected the care provided. Dr C further stated that as Mr A had been diagnosed with heart failure while overseas, additional radiological scans should have been carried out around that time.

---

<sup>10</sup> Part of the spine in the lower back.

## Opinion: Hawke’s Bay District Health Board — breach

62. As a healthcare provider, HBDHB is responsible for providing services in accordance with the Code of Health and Disability Services Consumers’ Rights (the Code). It has a responsibility to ensure that there are appropriate systems in place so that clinicians receive important information relating to patient investigation results. I consider that in this case the care provided to Mr A by HBDHB was suboptimal, as discussed below.

### Rheumatology care

63. On 9 Month<sup>2</sup>, Mr A was seen by Dr B, who ordered an HRCT to investigate concerns of ILD. Mr A was reviewed again by Dr B on 22 Month<sup>5</sup>, by which time the suspicion for ILD had reduced significantly, and Mr A was referred to Cardiology. Dr B attempted to access Mr A’s HRCT report at that appointment but it was not yet available on ECA.
64. My expert advisor, rheumatologist Dr Andrew Harrison, advised that the standard of care undertaken by Dr B at his review of Mr A on 9 Month<sup>2</sup> was “completely appropriate, and goes beyond the expected duties of a rheumatologist”. Dr Harrison further advised:
- “There was no suspicion of a cancer-related cause of shortness of breath ... It may have been appropriate to omit the HRCT from the investigations at that stage until cardiac causes has been investigated and treated.”
65. In relation to Dr B’s second review of Mr A on 22 Month<sup>5</sup>, Dr Harrison advised that it was reasonable for Dr B to have waited until the CT scan result appeared in his results inbox rather than contact the Radiology Department to ask why the report had not been issued. Dr Harrison said that this is because “the symptomatic improvement following treatment for arrhythmia and congestive heart failure made it less likely that shortness of breath was due to lung disease, which was the initial reason for requesting the scan”.
66. Dr Harrison advised that Dr B’s explanation for why he did not follow up on the pending CT scan report is reasonable.
67. The person who orders an investigation is responsible for following up on the result. It is also the HBDHB policy that the named SMO is responsible for maintaining an overview of unread results, and maintains responsibility for the patient. Ordinarily I would be critical of Dr B for failing to follow up the pending result; however, as discussed below, I consider that there was a systemic failure to alert Dr B to the CT scan result, for which HBDHB is responsible. I also accept Dr Harrison’s advice that in the circumstances of Mr A’s resolving symptoms it was reasonable for Dr B to await the result rather than contact the Radiology Department to query why the report had not been issued. Further, I note Dr B’s explanation that radiology reports were often delayed, and that he was not aware of any system other than ECA for reviewing electronic results.

### Scan reporting failure

68. The findings of Mr A's CT scan taken on 18 Month3 were reported by Dr C the following day. While the report was written and available on RIS, HBDHB's system failed to allow relevant clinicians to access it for the following reasons:
- 1) The report did not load to ECA, and there was no alert that it had not been sent through to ECA because of an IT issue.
  - 2) The paper system (which Dr B used as a back-up to ECA) also failed to alert Dr B to the result.
  - 3) Clinicians were not aware that they could view the report on RIS. HBDHB policy states that electronic results are to be viewed on ECA, but the AER found that there was a lack of DHB-wide agreed process for reviewing outstanding test results.
  - 4) The report went to a generic general practice address rather than a specific GP.
  - 5) Dr B advised that there had been delays in the finalisation of radiology reports, which contributed to his reasons for not querying the "pending" result.
69. Dr Harrison advised that it is unacceptable for investigation reports to fail to reach the ordering clinician, and although the report may have been available on RIS, it was not visible to Dr B on ECA, which is where reports are signed off. Dr Harrison advised:
- "In this respect, the Hawke's Bay DHB reporting system failed to meet the standard of care. The departure from the expected standard is significant, as it puts patients like [Mr A] at risk of harm from failure to diagnose, or delay in the diagnosis of, serious illness. It is likely that other medical practitioners would share this view."
70. I am highly critical that multiple failures in HBDHB's system meant that Mr A's treating clinicians were unable to view his HRCT scan report for over a year, which in turn affected the timeliness of treatment provided to Mr A.
71. I note that HBDHB has identified and rectified the IT error that occurred in this case, and that its new Clinical Portal is expected to improve access to radiology reports.

### Conclusion

72. I am critical that multiple failures in HBDHB's system meant that Mr A's treating clinicians did not view his HRCT scan report for over a year, which affected the timeliness of treatment provided to Mr A. Accordingly, I find that HBDHB failed to provide Mr A with an appropriate standard of care and breached Right 4(1) of the Code.<sup>11</sup>

---

<sup>11</sup> Right 4(1) states: "Every consumer has the right to have services provided with reasonable care and skill."



## Opinion: Dr C — adverse comment

73. Dr C performed Mr A's HRCT on 18 Month3. His report concluded that there was no significant ILD and described other findings, which included pleural effusion and mediastinal/hilar lymphadenopathy; however, Dr C did not record any differential diagnosis or make recommendations for follow-up actions in regard to those findings. HBDHB stated that there would be an assumption that a specialist physician such as Dr B would know the differential diagnosis and workup of ML and pleural effusion.
74. My expert advisor, radiologist Dr David Milne, reviewed Mr A's CT scan and advised that Dr C's report fell short of the standard expected of a general radiologist working in a DHB.
75. Dr Milne advised:
- “In respect of the clinical question regarding possible [ILD] as a cause for the showers of crackles heard by the referring doctor which prompted the CT referral, [Dr C] ... notes several of the features of ILD in his report, namely fine honeycombing, septal thickening. He overlooks further honeycombing in the left costophrenic recess. [Dr C] ascribes these changes to heart failure but they are not consistent with that diagnosis, being more consistent with early rheumatoid lung disease. The changes are subtle and correct classification could fall outside of the expected standard of care provided by a general radiologist as compared to a specialist chest radiologist.”
76. In relation to the right pleural effusion identified in the report, Dr Milne advised:
- “[It] is a more complex effusion ... being loculated, associated with small areas of folded lung and most importantly being associated with mediastinal pleural thickening which has a very high [association] with pleural malignancy. Aside from malignancy as a cause of mediastinal pleural thickening, [tuberculosis] infection of the pleural would be the most next likely cause. Both of these potential diagnoses are significant for the patient and I would have expected a reporting radiologist to make particular note of at least the possible malignant diagnosis and recommend further investigations.”
77. Dr Milne further advised that Dr C's failure to note the issue of mediastinal pleural thickening in his report “significantly reduced the clinical utility of his report for the clinician and the patient”, and the misdiagnosis of pleural disease on the HRCT report in this case fell outside the expected standard of care.
78. In relation to findings of lymphadenopathy, Dr Milne advised:
- “The adenopathy was mentioned in the report of the imaging but the supraclavicular adenopathy was not. However merely mentioning the presence of the nodes does indicate to the clinician whether ... further investigation of this reported finding is required. ... [Dr C's] failure to direct the clinician as to whether the nodes were significant requiring further investigation or ... to be ignored ... falls outside of an expected standard of care.”

79. Overall, Dr Milne believes that Dr C did not adequately communicate to the referring clinician the CT imaging findings of ILD, potentially malignant pleural effusion, and the significant supraclavicular and mediastinal lymphadenopathy. Dr Milne advised that the report did not offer “useful diagnoses” based on the reported findings, or direct the clinician as to which findings required further action, and said that this kind of omission could have the effect of contributing to a delay in diagnosing a significant condition. Dr Milne further advised, however, that such a standard of image reporting is relatively common, and that therefore peer disapproval of the quality of Dr C’s report would be mild.
80. I accept my expert’s advice and find that Dr C should have noted the possible malignant diagnosis for Mr A’s right pleural effusion and recommended further investigations. I am further concerned that Dr C failed to report on the scan finding of mediastinal pleural thickening, which would have increased the utility of his report, and that he further failed to report on the significance or otherwise of Mr A’s lymphadenopathy and whether it required follow-up. Such actions would have added an extra layer of safety for Mr A’s ongoing care.
81. Notwithstanding the electronic system failure that caused Mr A’s scan report to be unavailable on ECA for over a year, I find that the standard of Dr C’s scan report fell somewhat short of the ideal standard for such care.

---

### **Opinion: Medical centre — other comment**

82. The medical centre received an electronic copy of the scan report via Healthlink, but the report was not sent to an individual GP. It appears that a GP reviewed and filed the report with the understanding that the specialist who requested the scan would arrange further care if required, and there was no request for the GP to follow up the scan.
83. My in-house clinical advisor, Dr David Maplesden, advised that there was no departure from accepted practice by the medical centre in relation to its management of the CT scan results. He advised:
- “The HRCT had been ordered by the rheumatologist. There was no deputising of results management to the GP. There is no mention in subsequent rheumatology clinic letters of the HRCT report. Under the circumstances, I don’t think the way the report was presented was likely to make the GP think that proactive (GP) follow-up of the report was warranted ... and it was reasonable in this case for the GP to assume that if the rheumatologist thought there was any need for referral to a respiratory physician (which is not strongly indicated in the report), the rheumatologist would arrange it.”
84. I accept this advice and find that the medical centre’s care in this instance was adequate.

## Recommendations

85. I recommend that HBDHB:
- a) Provide a written apology to Mrs A. The apology is to be sent to HDC within one month of the date of this report.
  - b) Provide an update on its implementation of the new Clinical Portal and the effect this has had on HBDHB's service, particularly with regard to unacknowledged investigation results, within four months of the date of this report.
  - c) Conduct a review of waiting times to access Cardiology and Rheumatology clinics, and report the findings to HDC within four months of the date of this report.
- 

## Follow-up actions

86. A copy of this report with details identifying the parties removed, except the experts who advised on this case and HBDHB, will be sent to the Health Quality & Safety Commission and the Royal Australian and New Zealand College of Radiologists, and placed on the Health and Disability Commissioner website, [www.hdc.org.nz](http://www.hdc.org.nz), for educational purposes.

## Appendix A: Independent advice to the Commissioner

The following expert advice was obtained from rheumatologist Dr Andrew Harrison:

“Thank you for asking me to provide expert advice on this case. I confirm that I do not have any conflict of interest. I have been provided with and have read the documents listed in your letter dated 9 November.

The details of the case are summarized in your letter, and in the adverse event review undertaken by Hawke’s Bay DHB. These documents appear to provide an accurate summary of the events.

The essence of the complaint relates to a delay in the diagnosis of cancer, which may have had an adverse effect on the outcome.

[Mr A] was seen in clinic by [Dr B], rheumatologist, on 9 [Month2]. He had seen [Mr A] in the Acute Assessment Unit on 10 [Month1] with dyspnoea thought to be due to a chest infection, but wondered if there may have been an underlying interstitial process based on the finding of widespread crackles. At review in clinic on 9 [Month2], [Dr B] noted atrial fibrillation with rapid response and a recently elevated BNP, suggesting congestive cardiac failure. [Dr B] arranged a HRCT chest and an echocardiogram, and referred [Mr A] to the cardiologists.

Comment: The standard of care undertaken by [Dr B] at that visit appears completely appropriate, and goes beyond the expected duties of a rheumatologist. It would have been equally appropriate for [Dr B] to advise the patient to make an appointment with his GP to discuss his respiratory and cardiac symptoms. There was no suspicion of a cancer-related cause of shortness of breath; the differential diagnosis at that stage being infection, cardiac failure and perhaps interstitial lung disease. It may also have been appropriate to omit the HRCT from the investigations at that stage until cardiac causes had been investigated and treated. In the course of his assessment, [Dr B] arranged the HRCT, which ultimately showed an abnormality that could potentially have led to an earlier diagnosis of lung cancer.

The HRCT chest was performed on 18 [Month3] and reported by [Dr C], radiologist, on 19 [Month3]. A number of abnormalities were reported, including: a right pleural effusion, (for which the differential diagnosis — although not discussed in the report — would include infection, heart failure and lung cancer); honeycombing, (the significance of which is not discussed in the report); emphysema and bullae (likely related to [Mr A’s] smoking history); cardiomegaly, which usually denotes left ventricular failure; and mediastinal lymphadenopathy, (the significance of which is not discussed in the report). There is no mention of any pulmonary nodule or other radiological sign to suggest a tumour within the lung parenchyma. The differential diagnosis for mediastinal lymphadenopathy includes granulomatous diseases such as tuberculosis and sarcoidosis, and malignant causes, including lymphoma and lung cancer, especially in the elderly. The possibility of an underlying lung cancer is not mentioned in the report.

Comment: The report on the CT scan mentions the important radiological findings, but does not draw attention to the possible causes of mediastinal lymphadenopathy, which would include malignancy in a [man in his seventies] with a smoking history.

[Mr A went overseas] some time between the date of the CT scan and his appointment with [Dr B] on 22 [Month5]. During [his visit] he was admitted to hospital where he was treated with AV node ablation and cardiac resynchronization with a biventricular pacemaker and implanted defibrillator.

He was reviewed by [Dr B] in rheumatology outpatients on 22 [Month5]. [Dr B] noted that orthopnoea and paroxysmal nocturnal dyspnea had resolved, along with better control of atrial fibrillation. [Mr A] had missed his appointments in cardiology as notification had been sent while he was away. [Dr B] renewed the referrals to cardiology. [Dr B] does not mention the HRCT chest in his letters from that visit, but Hawke's Bay Adverse Event Review states that the HRCT chest report was 'marked as pending and therefore no report was available for him'. It also states that 'as [Mr A] had clinically improved Rheumatologist 1 ([Dr B]) was no longer concerned about significant interstitial lung disease so the CT report was not considered urgent.'

Comment: At that point [Dr B] could have contacted the radiology department to ask why the report had not been issued, or discussed the scan with a radiologist directly. However, the symptomatic improvement following treatment for arrhythmia and congestive heart failure made it less likely that shortness of breath was due to lung disease, which was the initial reason for requesting the scan. It seems reasonable for [Dr B] to have waited until the scan appeared in his results inbox.

[Mr A] was seen in cardiology outpatients by [Dr E] on 13 [Month7], 3 [Month8] and 1 [Month9]. The focus of those visits was management of heart failure and arrhythmia. He complained of fatigue and exhaustion, but did not have dyspnoea. There was no mention of the CT scan.

Comment: The role of the cardiologist in this setting was to assess and manage cardiac problems. It is not clear whether [Dr E] was aware that the CT scan was pending, but even if he were aware of this, he should not have been expected to have chased the report, given that it was not relevant to the cardiac assessment.

[Dr E] had planned to see [Mr A] in clinic 2 months after the 1 [Month9] appointment, but this did not happen, seemingly due to lack of availability of appointment slots in the public service. [Mr A] saw [Dr D], cardiologist, at his private rooms on 15 [Month15]. At that visit he was complaining of shortness of breath on minimal exertion, and an echocardiogram was performed two days later that [showed] relatively good left ventricular function. The report states that 'It is likely that there is an alternative medical explanation for his shortness of breath.'

Comment: The role of the cardiologist in this setting was to assess and manage cardiac problems. It is not clear whether [Dr D] was aware that the CT scan was pending, but

even if he had been aware of this, he should not have been expected to have chased the report, given that it was not relevant to the cardiac assessment.

In late [Month15] [Mr A] was admitted to the HBDHB Acute Assessment Unit under the general physicians, following the finding of tender lymph nodes in the left base of neck by his GP on 26 [Month15]. The report on the previous HRCT from [Month3] was available to the general physicians, but the conclusion of their assessment was that the cervical lymphadenopathy was 'probably due to transient viral/bacterial infection given rise and fall of inflammatory markers.' A lymph node biopsy was not considered necessary. A follow-up CT scan was arranged, which confirmed a diagnosis of metastatic cancer, and a lymph node biopsy later showed adenocarcinoma, likely of lung origin.

Comment: The fact that a cancer diagnosis was not discussed or considered likely by the general physicians, even once the lymphadenopathy had become palpable externally, raises doubts about whether earlier availability of the [Month3] CT scan report would have resulted in an earlier diagnosis of cancer.

[Mr A] consulted [Dr D] again on 6 [Month16]. At that visit [Dr D] was aware of the [Month3] CT scan report, being now able to access it via the RISPACS system, although the report was not authorized for viewing on the ECA until 13 [Month16].

Comment: The report on the HRCT chest from 18 [Month3] was available on RISPACS, but remained marked as pending on the ECA until 13 [Month16]. The scan was not available for sign-off by the ordering clinician for over a year, in which time [Mr A] experienced progression of lymphadenopathy that was ultimately diagnosed as metastatic adenocarcinoma of the likely lung origin.

Comments and conclusions: [Dr B] ordered a HRCT chest when he heard crackles in [Mr A's] chest that alerted him to the possibility of interstitial lung disease. Ultimately the crackles proved to be due to left ventricular failure and they resolved with treatment of heart failure. The indication for an HRCT in this situation was reasonably 'soft', meaning that other clinicians would not necessarily have requested the CT scan, at least until the cardiac problems had been managed.

The CT scan showed mediastinal lymphadenopathy, but neither the reporting radiologist at the time, nor the general physicians seeing the scan a year later in the context of palpable cervical lymphadenopathy, documented the possibility of malignancy. In the case of the reporting radiologist, there is a question of whether the report should have mentioned the possibility of lung cancer. The HDC could consider getting an opinion on this from an expert radiologist. As it transpired, the content of the report did not influence the outcome, as more definitive investigations were put in place soon after the report was first seen by any of [Mr A's] treating clinicians, owing to the long delay before the report was available on the ECA.

While the soft indication and the lack of specificity of the CT findings might reduce the impact of the reporting failure in this case, it is nevertheless unacceptable for investigation reports to fail to reach the ordering clinician. Although the report may

have been available on RISPACS, it was not visible to the ordering clinician on the ECA, which is where reports are signed off. In this respect, the Hawke's Bay DHB reporting system failed to meet the standard of care. The departure from the expected standard is significant, as it puts patients like [Mr A] at risk of harm from failure to diagnose, or delay in the diagnosis of, serious illness. It is likely that other medical practitioners would share this view.

The Hawke's Bay DHB has conducted an Adverse Event Review of this case, which acknowledged that 'insufficient systems are in place to ensure that these results are easily obtained, tracked and recorded.' In addition, 'a paper copy did not reach the requesting clinician for unknown reasons.' Furthermore, 'General Practice electronic copy of result received at generic account and not by named General Practitioner.' And finally, 'lack of defined system for ensuring follow up of a pending result by clinical staff; several clinicians checked for the result, but finding it 'pending' did not follow this further despite recognizing that the result was delayed.'

With regard to this last finding, it is necessary to consider whether the rheumatologist and cardiologists who saw [Mr A] in clinic failed to meet the expected standard of care by neglecting to chase the result of the scan.

There is no evidence from the clinic letters that either cardiologist was aware that the CT scan had been requested. Even if they had been aware, the result of the scan would not have been relevant to [Mr A's] cardiac assessment, and would not have been required to decide management.

[Dr B] was the requesting clinician, and as such had responsibility for sign-off of the report. In the strictest sense, failure to chase up a report that had been pending for several months could be seen as departure from the expected standard of care. However, several factors could be considered to reduce the significance of this.

1. The scan was requested to look for the cause of symptoms that were later attributed to another cause, and which improved with treatment.
2. The response to treatments for cardiac problems meant that the result of the CT scan was no longer needed to decide management.
3. Mediastinal lymphadenopathy was an incidental finding, and there was no suspicion of a malignant process from the clinical picture at the time the scan was ordered. Although [Mr A] was ultimately diagnosed with metastatic adenocarcinoma of likely lung origin, there was no reason to suspect this diagnosis during rheumatology clinic visits, and therefore no strong need to chase the results of the CT scan. The Hawke's Bay DHB Adverse Event Report notes a shortage of rheumatology clinic appointments. When a service faces high demand it is often necessary for clinicians to prioritise urgent tasks over less urgent ones such as chasing a non-urgent radiology report, especially when there was still an expectation that the report would eventually be seen on the ECA.

As a final comment, it is difficult to be certain what outcome may have ensued if the report had been available on the ECA immediately after reporting. It is likely that [Dr B] would have considered the possible causes of mediastinal lymphadenopathy and may have discussed the report with the radiologist, or with clinicians in other specialties, as would other rheumatologists in the same position. The lack of primary lung pathology may have resulted in a 'wait-and-see' approach, with a follow-up scan in three to six months, given the difficulty in obtaining a biopsy from the mediastinum. An opinion from a respiratory physician could be helpful to determine the likely impact of the reporting failure on the outcome.

Yours sincerely,

Andrew Harrison MBChB FRACP PhD  
Rheumatologist  
**Associate Professor in Medicine, University of Otago Wellington**

Dr Harrison provided the following further expert advice on 25 June 2019:

“Thank you for asking me to comment on the new information received on this case from Hawke’s Bay DHB, dated 10 May 2019.

In regard to whether this information changes the advice that I previously provided, dated 7 December 2018, the key sections of the report for me to consider are sections 1 and 2 that outline the response to the questions raised by me in regard to the radiologist’s report on the HRCT chest, and section 3 and the related appendices that provide responses from [Dr B] and [Dr E]. I am unable to comment on the sections of the report that address the failure of the delivery of the report to the relevant clinicians, other than to say that new procedures have evidently been developed to address this problem.

In section 2 [Dr G] discusses the report, drawing attention to the clinical information provided by the requestor. I agree that the report addresses the questions raised in the referral and that a specialist physician would have been aware of the differential diagnosis for the findings described.

I have read [Dr B’s] statement (Appendix 1). The explanation given for not following up on the pending HRCT report; that the need for the scan had diminished once it became clear that heart failure, not interstitial lung disease, was the most plausible explanation for his symptoms, seems reasonable.

In Appendix 2, [Dr E] states that he was unaware that a CT scan had been performed, and that the crackles had resolved after treatment for heart failure, suggesting that they had been due to heart failure not interstitial lung disease. The issues described in [Dr E’s] statement are consistent with my interpretation of the events.



The new information received from the DHB does not change the advice that I provided on 7 December 2018.

Yours sincerely,

Andrew Harrison MBChB FRACP PhD  
Rheumatologist, **Associate Professor in Medicine, University of Otago Wellington**”

## Appendix B: Independent advice to the Commissioner

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

“I have been requested by HDC to give opinion on the reporting of a CT examination of the chest on this man performed at Hawkes Bay DHB on 18 [Month3] and reported by [Dr C], Radiologist, on 19 [Month3].

Specifically, I have been requested to opine on

- The accuracy of the reported findings
- Whether there was sufficient detail about the significant findings

I have also been asked to advise on whether I believe there has been an acceptable standard of care in the reporting of this examination.

I have received a copy of the referral form, the imaging performed at Hawkes Bay DHB on [Mr A] dated 18 [Month3] and the report on the imaging by [Dr C] for the examination.

The referral form supplies the following clinical data:

*Known seronegative rheumatoid arthritis of longstanding. Admitted with presumed pneumonia [Month1]. Showers of bibasal crackles.*

The examination was requested as an HRCT examination which is a CT examination of the chest optimized for detecting diffuse parenchymal lung disease which can be an association of rheumatoid disease.

### **My review of the imaging**

The imaging has been performed as a High Resolution CT examination of the chest and is of acceptable diagnostic standard.

There is a small to medium sized loculated right pleural effusion associated with small areas of folded and atelectatic lung in the right middle and lower lobes. There is an area of mediastinal pleural thickening anteriorly on the right overlying the right atrium.

No pulmonary nodules are seen. There is enlargement of the subcarinal node measuring 27mm in diameter and abnormally enlarged 2R, 4R, 5 and 6 nodes measuring up to 18mm in diameter. Enlarged right supraclavicular nodes are seen on the right.

There is minor subpleural fibrosis in the mid to lower zones of both lungs with minor honeycombing seen in the lateral costophrenic recess on the left. Changes of mild emphysema are noted in the upper zones of both lungs, a legacy of prior cigarette smoking.

Incidental note is made of calcific aortic stenosis.

*Comment:*

There is mild interstitial lung disease which would confirm the clinical findings of showers of crackles. In rheumatoid disease this will be most likely Usual Interstitial Pneumonitis and the small patch of honeycombing would support that. The extent of disease is mild currently but progression would be likely.

The right pleural effusion with loculation is noted. The effusion is likely exudative as there are areas of atelectatic lung associated. While pleural effusions can also be seen in rheumatoid disease mediastinal pleural thickening is seen on the right side and this has a positive predictive value for underlying pleural malignancy that is around 90%. Additionally there is significant mediastinal and supraclavicular lymphadenopathy which requires explanation.

While mild interstitial lung disease has been confirmed, my main concern is about possible right pleural malignancy and the mediastinal lymphadenopathy may also be malignant. Respiratory opinion is recommended regarding pleural aspiration/biopsy. Endoscopic sampling of the mediastinal nodes should also be considered.

**How the imaging was reported**

Findings: There is a slight cyst through the chest were obtained (*note this is clearly a speech to TXT report as the software has misinterpreted what [Dr C] has said and entered this sentence which is non-sensical. Should have been edited and corrected by [Dr C] when he validated this report.*)

**Reviewing the CXR on 12 [Month1]**

There is evidence of a right pleural effusion extending into the transverse fissure.

Evidence of fine honeycombing changes in the subpleural region of the upper zones.

Changes of mild COPD in the form of emphysematous changes seen in the upper lobes with paraseptal bullae seen.

There is thin septal thickening in both bases.

Evidence of marked cardiomegaly of left ventricular character.

Evidence of mediastinal lymphadenopathy involving the anterior mediastinum and the paratracheal region with the largest node measuring 18mm in shortest axis.

The changes are more consistent with mild pulmonary congestion. There are no signs of any significant interstitial lung disease of the present stage.

**My comment of the report by [Dr C]**

The imaging findings which I believe were not adequately communicated to the referring clinician in [Dr C's] report include the diagnosis of interstitial lung disease

(ILD), the potentially malignant right pleural effusion and the significant supraclavicular and mediastinal lymphadenopathy. The presence of calcific aortic stenosis could have been raised but may have been more obvious clinically.

*ILD:*

In respect of the clinical question regarding possible interstitial lung disease (ILD) as a cause for the showers of crackles heard by the referring doctor which prompted the CT referral, [Dr C] contradicts himself in that he notes several of the features of ILD in his report, namely fine honeycombing, septal thickening. He overlooks further honeycombing in the left costophrenic recess. [Dr C] ascribes these changes to heart failure but they are not consistent with that diagnosis, being more consistent with early rheumatoid lung disease. The changes are subtle and correct classification of the findings could fall outside of the expected standard of care provided by a general radiologist as compared to a specialist chest radiologist.

*Pleural malignancy:*

The right pleural effusion was presumably thought to be due to heart failure by [Dr C] but it is a more complex effusion than would typically occur in heart failure being loculated, associated with small areas of folded lung and most importantly being associated with mediastinal pleural thickening which has a very high association with pleural malignancy. Aside from malignancy as a cause for mediastinal pleural thickening, TB infection of the pleural would be the next most likely cause. Both of these potential diagnoses are significant for the patient and I would have expected a reporting radiologist to make particular note of at least the possible malignant diagnosis and recommend further investigations. I suspect that [Dr C] did not observe the mediastinal pleural thickening when he made his report and this failure significantly reduced the clinical utility of his report for the clinician and the patient. The mis diagnosis of the pleural disease in this case fell outside of the expected standard of care in my opinion and may have delayed an important diagnosis for [Mr A].

*Mediastinal adenopathy:*

The adenopathy was mentioned in the report of the imaging but the supraclavicular adenopathy was not. However merely mentioning the presence of the nodes does not indicate to the clinician whether there is any significance being attached to the finding and therefore creates doubt in the mind of the clinician as to whether further investigation of this reported finding is required. It is the role of the radiologist to give opinion on whether or not observed findings are significant and warrant further investigation and [Dr C] failed in this regard. His failure to direct the clinician as to whether the nodes were significant requiring further investigation or whether they were reactive and to be ignored or followed falls outside of an expected standard of care.

**General comments about the report style of [Dr C] in this case**

The report style is descriptive but does not offer useful diagnoses based on the imaging findings (erroneous diagnosis of heart failure excepted) or direct the clinician as to what findings are significant and require further work up/action. This failure may have contributed to what was presumably a delay in diagnosis of a significant condition, namely malignancy.

**Summary**

*[Dr C's] report of the imaging performed on [Mr A] on 18 [Month3] falls short of the standard expected of a general radiologist working in a DHB and this may have impacted the care subsequently delivered to [Mr A].*

Such standard of reporting of imaging would, however, be a common finding in the regular radiologist quality review meetings which are typically held in DHBs around the country for in-house educational purposes. As past convener of the radiology quality assurance meeting at ADHB, I would judge that peer disapproval for the quality of the reported findings would be mild.

Errors of observation and interpretation are common in clinical radiology and isolated errors do not necessarily call into question a reporting radiologist's competence to practise in my opinion.

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

Yours sincerely

Dr David Milne

**Radiologist"**

Dr Milne provided the following further expert advice on 25 June 2019:

"On 1 May 2019 I provided advice to the Health and Disability Commissioner regarding the reporting of the imaging performed at Hawkes Bay DHB on [Mr A]. Essentially the case involved a failure to highlight in the formal report on a CT chest examination possible malignant pleural thickening and significantly enlarged mediastinal lymph node enlargement which warranted further investigation.

In my advice I concluded that:

*[Dr C's] report of the imaging performed on [Mr A] on 18 [Month3] falls short of the standard expected of a general radiologist working in a DHB and this may have impacted the care subsequently delivered to [Mr A].*

However I also advised:

Such standard of reporting of imaging would, however, be a common finding in the regular radiologist quality review meetings which are typically held in DHBs around the country for in-house educational purposes. As past convener of the radiology

quality assurance meeting at ADHB, I would judge that peer disapproval for the quality of the reported findings would be mild.

I have been asked to reconsider my advice following receipt of written replies from [Dr C] who was the radiologist working at Hawkes Bay DHB and who reported the imaging in question and [Dr G], the Head of Department for Radiology.

**[Dr C's] reply**

[Dr C] does not disagree with my interpretation of the imaging findings and agrees that his report did not highlight the potential significance of the enlarged mediastinal nodes that were present on the imaging. He highlights an IT problem where reports were not routed to the referring clinician.

**[Dr G's] reply**

[Dr G] considers in his advice that the mention of an 18mm diameter mediastinal node in [Dr C's] report amounts to sufficient information for the referring clinician to make further plans to investigate the cause without the requirement by the reporting radiologist to summarise the findings into a narrow differential diagnosis. He comments that 'ideally recommendations regarding follow-up and respiratory review should have been made' but he also expected that these should have been initiated by the referring clinician.

**My opinion**

My interpretation of the advice provided by [Dr C] and [Dr G] in respect of my report is that they do not disagree with my interpretation of the imaging and that [Dr G] considers that 'under ideal circumstances' [Dr C] would have provided the referring clinician with more information about potential significant diagnoses and made recommendations as to which specialist service was best able to resolve any diagnostic uncertainties, namely the respiratory physicians.

My opinion to HDC was based on ideal circumstances as this is the standard on which we are judged. Mitigating factors then need to be considered. The main mitigations in this case are that radiologists despite the best of intentions miss findings that are there on the imaging and fail to make appropriate recommendations to the referring clinicians.

[Dr G] describes an IT issue affecting report distribution which I was not asked to comment on in my initial advice. IT issues affecting the distribution of radiology reports to the correct referrers and also to the patient's GP are not uncommon in my experience. We have had similar but unrelated issues with this process at ADHB.

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

Yours sincerely

Dr David Milne  
**Radiologist"**

## Appendix C: In-house advice to the Commissioner

The following expert advice was obtained from GP Dr David Maplesden:

“[The medical centre] should have a robust policy/process in place to ensure all results are seen by a GP before filing. This includes assigning and ‘unassigned’ results to the appropriate GP. Receiving unassigned results is not an uncommon occurrence.

On reviewing the notes it appears the provider identified as [initials] filed the CT result in question on 18 [Month3]. I presume he/she viewed the results before filing.

The report itself includes reference to several pathologies (signs of possible COPD, heart failure and enlarged mediastinal lymph nodes). There is no particular extra attention drawn to the enlarged lymph nodes (no summary of most relevant findings), no mention of the lymph nodes representing possible suspicion for malignancy or any particular pathology, no follow-up advice such as ‘specialist review recommended’ which would normally be expected if there were suspicious findings.

The HRCT had been ordered by the rheumatologist. There was no deputising of results management to the GP. There is no mention in subsequent rheumatology clinic letters of the HRCT report. Under the circumstances, I don’t think the way the report was presented was likely to make the GP think that proactive (GP) follow-up of the report was warranted (unlike for example if it had reported findings suspicious for malignancy or recommended specialist follow-up), and it was reasonable in this case for the GP to assume that if the rheumatologist thought there was any need for referral to a respiratory physician (which is not strongly indicated in the report), the rheumatologist would arrange it.

In conclusion, I would be unlikely to find any departure from accepted practice by the GP for the reasons described above. However, it may be worth asking the practice for its policy on management of results, and for clarification of who the result was assigned to and who filed it.

Dr David Maplesden  
**Medical Advisor**  
**Health and Disability Commissioner”**