香 港 醫 務 委 員 會

The Medical Council of Hong Kong

DISCIPLINARY INQUIRY
MEDICAL REGISTRATION ORDINANCE, CAP. 161

Defendant: Dr LEUNG Wai Yeung (梁偉揚醫生) (Reg. No.: M09193)

Dates of hearing: 16 May 2020 (Saturday) (Day 1);
8 November 2020 (Sunday) (Day 2);
12 December 2020 (Saturday) (Day 3); and
13 December 2020 (Sunday) (Day 4)

Present at the hearing

Council Members/Assessors: Prof. LAU Wan-yee, Joseph, SBS
(Chairperson of the Inquiry Panel)
Dr LEE Wai-hung, Danny
Dr CHIU Shing-ping, James
Ms HUI Mei-sheung, Tennessy, MH, JP
Mr NG Ting-shan

Legal Adviser: Mr Edward SHUM

Defence Solicitor representing the Defendant: Mr Chris HOWSE of
Messrs. Howse Williams

Deputy Principal Government Counsel (Acting): Mr Mark CHAN
representing the Secretary

1. The amended charges against the Defendant, Dr LEUNG Wai Yeung, are:

"That, in or about February 2004, he, being a registered medical practitioner, disregarded his professional responsibility to his patient [redacted] ("the Patient"), deceased, in that despite the Patient's bone scan report of 9 January 2004 alerting the possibility of bone metastases,

(A) (i) he failed to make proper differential diagnosis of bone metastases; and/or

(ii) he left the case to the next doctor to review the Patient's condition in an improper and inappropriate manner, in that despite the specialist (Nuclear Medicine)'s findings or advice (i) of disease progression and (ii) to undertake more investigations to rule out bone metastases with unknown underlying malignancy, he made notes simply of "*no bone pain*", "*bone scan done*", "*x-ray [increase in size of] sclerotic lesion*" and "*[follow up] x-ray*" in the medical records; and/or

(B) he failed to arrange immediate or urgent investigations to rule out aggressive lesions or multiple bone metastases when the circumstances so warranted.

In relation to the facts alleged, either singularly or cumulatively, he has been guilty of misconduct in a professional respect."

<u>Facts of the case</u>

2. The Defendant's name has been included in the General Register from 8 October 1993 to present. His name has been included in the Specialist Register under the Specialty of Orthopaedics & Traumatology since 6 February 2002.

3. Briefly stated, the Patient had a history of gastro-oesophageal reflux disorder and was seen by doctors at the Department of Medicine at Pamela Youde Nethersole Eastern Hospital ("PYNEH") on a regular basis since January 2000.

4. On 5 August 2003, the Patient was referred by one Dr LIM, Occupational Health Officer of the Kwun Tong Occupational Health Clinic, to the Department of Orthopaedics & Traumatolgy ("O&T") of PYNEH for investigation of incidental findings of multiple sclerotic bony lesions detected during a routine body check for his job as a fireman.

5. There is no dispute that Dr LIM's referral was preceded by a skeletal survey done by x-rays at United Christian Hospital ("UCH") on 24 July 2003. According to the X-ray Examination Report obtained from UCH, skeletal survey then revealed:

"*Heart size is not enlarged. No abnormal enlarged hilar or mediastinal mass is noted. Oval sclerotic lesion 8mm in diameter seen projecting over the anterior aspect of the left 6th rib ? rib lesion ? lung nodule. Further*

evaluation with an oblique view of the left ribs is helpful. No consolidation can be identified in the right lung. Both costophrenic angles are clear. Multiple small oval sclerotic lesions identified in the left proximal femur, right ilium and acetabulum. ? bone islands ? nature. Please correlate with clinical findings. Further evaluation with a bone scan is helpful."

6. According to the medical records obtained from PYNEH, the Patient attended the O&T Outpatient Clinic of PYNEH on 5 September 2003. Physical examination then revealed that the Patient's chest was clear. His abdomen was soft. There was no pain in his hip or groin. His back, lower limbs, hip, knee and ankle were all non-tender. Arrangement was made for the Patient to be admitted to PYNEH for investigation of his pelvis and hip by skeletal x-rays.

7. According to the medical records obtained from PYNEH, x-rays taken of the Patient's pelvis and hip on 8 September 2003 showed no feature of AVN [avascular necrosis]. Haematology Report and Chemical Pathology Report of the same date also showed no abnormality.

8. On 30 September 2003, the Patient attended the Department of Nuclear Medicine of PYNEH for a bone scan. In his Examination Report on the Patient dated 3 October 2003, Dr LOK ████ ("Dr LOK") mentioned that:

> "***Clinical information***
> *Fireman. Body check showed multiple sclerotic lesions over the pelvic radiograph, likely to be bone island. Otherwise totally asymptomatic.*
>
> ***Scintigraphic Findings***
> *Dynamic blood flow and blood pool images of anterior pelvis; Planar images of the whole body; SPECT of LS spine:*
>
> 1. *No significant increased perfusion or blood pooling is noted at anterior pelvis.*
> 2. *Delayed images show multiple small focal increased uptake at the following sites:*
>   - *The manubrial side of the left sternoclavicular joint*
>   - *Lateral aspect of left 6th and 9th ribs*
>   - *Anterolateral aspect of right 7th to 9th ribs*
>   - *Left iliac crest*

- *Left sacral ala*
- *Right anterior ilium (corresponding to the sclerotic lesion seen on pelvic radiograph)*
- *Bilateral wrists and right knee (probably degenerative/ arthritic changes)*

Interpretation
Multiple small-sized activity foci are present in the pelvis and at the manubrium as well as some of the ribs. Their nature cannot be ascertained on bone scan, but in view of the multiplicity of lesion, bony secondaries cannot be excluded from this single scan. Please correlate with clinical and radiological findings and if necessary, a follow up bone scan for progress."

9. The Patient returned to the O&T Outpatient Clinic of PYNEH for follow up on 10 October 2003 and was seen by the Defendant. There is no dispute that the Defendant wrote down only the following consultation notes in the Outpatient Progress Sheet:

"*Totally asymptomatic*
Bone scan
multiple small uptake
cause ascertained

Fu [follow up] bone scan
4/12
Plan: D/C [discharge] if no change"

10. In his statement to the Preliminary Investigation Committee ("PIC") dated 26 September 2018, the Defendant further explained that:

"*8. The Patient was followed up by me on 10 October 2003 for review of the bone scan result. The bone scan report indicated that multiple small uptakes were noted "with uncertain cause but bony metastases cannot be excluded". I noted the pelvic x-ray showed a 2-3 cm sclerotic lesion in the pelvis. He remained well and asymptomatic. Repeated systematic enquiries for possible occult malignancy of chest, gastrointestinal tract, urinary tract, constitutional symptoms and bone pain were all negative. The Patient was therefore discharged for further follow up. A follow up bone scan was scheduled 4 months later. This was carried out on 9 January 2004.*"

11. On 9 January 2004, the Patient attended the Department of Nuclear Medicine of PYNEH for another bone scan. In his Examination Report on the Patient dated 14 January 2004, Dr LOK mentioned that:

> "***Clinical information***
> *Fireman. Body check showed multiple sclerotic lesions over the pelvic radiograph, likely to be bone island. Otherwise totally asymptomatic. Last bone scan in 09/03 showed multiple small foci of increased uptake. Follow-up bone scan for progress.*
>
> ***Scintigraphic Findings***
> *Planar images of the whole body; SPECT of LS spine:*
>
> *Delayed planar images again show multiple small focal increased uptake at the following sites:*
>
> - *The manubrial side of the left sternoclavicular joint*
> - *Lateral aspect of left 6th and 9th ribs*
> - *Anterolateral aspect of right 7th to 9th ribs*
> - *Left iliac crest*
> - *Left sacral ala*
> - *Right anterior ilium*
> - *Right knee (probably degenerative/arthritic changes)*
> - *Intertrochanteric region of left femur*
> - *Very mild increased uptake foci are suspected at T12 (body), L1 (right pedicle), L2 (right pedicle and body) & L4 (body) on SPECT of thoracolumbar spine.*
>
> ***Interpretation***
> *Compared with last bone scan in 9/03, there remain multiple small-sized activity foci in the pelvis, manubrium as well as some of the ribs. Scintigraphically they appear slightly more obvious. In addition very mild increased uptake foci are suspected at T12 (body), L1 (right pedicle), L2 (right pedicle and body) & L4 (body) on SPECT of thoracolumbar spine. Bone scan findings are suggestive of disease progression and deserve more investigations to rule out bony metastases with unknown underlying malignancy.*
>
> ***This report needs early attention.***"

12. The Patient returned to the O&T Outpatient Clinic of PYNEH for follow up on 6 February 2004 and was seen by the Defendant. There is no dispute that the Defendant only wrote down the following consultation notes in the Out-patient Progress Sheet:

> "*No bone pain*
> *bone scan done*
> *X-ray: ↑ size of sclerotic lesion*
>
> *FU (follow-up) X-ray*"

13. In his statement to the PIC dated 26 September 2018, the Defendant had this to say of the follow-up consultation on 6 February 2004:

> "*9. I saw the Patient for follow up on 6 February 2004. The bone scan report indicated that there were multiple small-sized foci in the pelvis, manubrium as well as some of the ribs. In addition very mild increased uptake foci were suspected at T12, L2, L2 [sic] and L4 on SPECT of the thoracolumbar region. The bone scan report suggested further investigation to rule out bony metastases with unknown underlying malignancy.*
>
> *10. I considered that characteristic patterns of bone metastases in the two bone scans were absent. Features indicative of metastases such as patchy, irregular and asymmetrical pattern were not present. Furthermore, the level of activity of lesions reported in the two bone scans was consistent with background activity seen in degenerative wrists and knees. Additionally, since activity should be proportional to size of lesion, the degree of uptake demonstrated in the sizable lesions over pelvis and proximal femur in both bone scans was far less than would be expected.*
>
> *11. A follow up pelvic x-ray had also been taken on 6 February 2004 [30 January 2004 (sic)]. I reviewed this image during the consultation. I ascertained that the pelvic x-ray showed the concerned lesion in the pelvis had increased by about 2-3 mm. Although bone islands are usually stable in size, slow growth with increase in size has been observed [Hideo Onitsuka, Roentgenolgic Aspects of Bone Islands, Radiology, 123:607, June 1977]. Additionally, after comparing the Patient's serial pelvic x-ray films, the lesion in the pelvis did not reach the*

Mirra's criteria for bone biopsy (<[> (sic)] 25% increase over 6 month) [Mirra JM (1989) Bone tumours. Lea & Febiger, Philadelphia, p. 182].

12. *... despite sizable sclerotic lesions detected by plain X-ray in pelvis and proximal femur, the intensity of uptake in these lesions on the bone scan was similar to other small lesions in the bone scan. This result was not consistent with aggressive bone lesions.*

13. *The lesions were consistent with the feature of bone islands and could be differentiated from bone metastases for the following reasons (i) absence of primary tumour (ii) slow growth rate (iii) clear demarcated margin with thorny radiation from a sclerotic lesion and (iv) absence of pain. [Ngan H: Growing bone islands. Clin Radiol 23:199-201, Apr 1972].*

14. *In light of the above and taking into consideration the clinical context at the time of follow up on 6 February 2004 (i.e. the Patient's history, absence of symptoms, the blood test results of 8 September 2003 and serial pelvic x-ray findings), I considered the sclerotic lesions seen on the serial bone scans were not consistent with bony metastases. I therefore opted to continue monitoring the lesions along with the Patient's clinical condition. Thus I arranged a follow up pelvic X-ray and a follow up appointment in 3-months' time.*"

14. The Defendant did not see the Patient again. On 30 April 2004, the Patient returned to the O&T Outpatient Clinic of PYNEH for follow-up and was seen by another doctor.

15. There is no dispute that the Patient subsequently underwent an ultrasound examination of his chest and upper abdomen on 9 September 2004 at St. Paul's Hospital ("SPH"). Multiple enlarged lymph nodes were noted in the upper abdomen close to the stomach. Upper endoscopy and biopsy on 10 September 2004 at SPH further revealed a diagnosis of carcinoma of the stomach. Dense sclerotic lesions were noted on his chest x-rays in the anterior aspect of the left 6th and right 7th ribs as well as in the region of the manubrium taken on 10 September 2004 at SPH.

16. Despite treatment, the Patient succumbed to disseminated disease on 31 May 2005.

17. The Patient's wife later lodged this complaint with the Medical Council by a letter on 15 October 2013.

Burden and Standard of Proof

18. We bear in mind that the burden of proof is always on the Legal Officer and the Defendant does not have to prove his innocence. We also bear in mind that the standard of proof for disciplinary proceedings is the preponderance of probability. However, the more serious the act or omission alleged, the more inherently improbable must it be regarded. Therefore, the more inherently improbable it is regarded, the more compelling the evidence is required to prove it on the balance of probabilities.

19. There is no doubt that each of the allegations against the Defendant here is a serious one. Indeed, it is always a serious matter to accuse a registered medical practitioner of misconduct in a professional respect. Therefore, we need to look at all the evidence and to consider and determine the disciplinary charges against him separately and carefully.

Findings of the Inquiry Panel

20. Expert witnesses on both sides agreed and we accept that diagnosis of bone metastases should not be made on clinical findings alone. And we agree with Dr CHIEN, expert witness for the Defendant, that this also involves consideration of radiological findings and results of haematological and chemical pathological investigations.

21. The Defendant acknowledged that Dr LOK had alerted him in the Patient's bone scan report of 9 January 2004 of the possibility of bone metastases. His primary diagnosis was benign bone islands but he also had in mind the differential diagnosis of bone metastases when he saw the Patient on 6 February 2004.

22. The Defendant told us that he had reviewed the Patient's file and considered everything in the round. He ruled out the differential diagnosis at the end of his second consultation on 6 February 2004 because he considered the Patient's case to be inconsistent with bone metastases.

23. The Defendant also told us that when comparing the Patient's serial pelvic x-ray films taken on 8 September 2003 and 13 January 2004, he noted that "*the lesion in the pelvis did not reach the Mirra's criteria for bone biopsy…*"; and "*[t]he lesions were consistent with the feature of bone islands and could be differentiated from bone metastases for the… reasons [that] (i) absence of primary tumour (ii) slow growth rate (iii) clear demarcated margin with thorny radiation from a sclerotic lesion and (iv) absence of pain.*"

24. We wish to point out that the "*Mirra's criteria for bone biopsy*" was never meant to be a diagnostic test for bone metastases. Indeed, Mirra emphasized in his book "*Bone Tumours: Clinical, radiologic, and pathologic correlations*" Vol. 1 at p. 184 that:

> "*By serial radiographic examination, the lesion should either show very slow growth or remain static in size. If a lesion is deemed a bone island, it should be confirmed by serial radiographic determination… I recommend follow-up radiographs at 1, 3, 6, and 12 months. If the lesion has increased in diameter by more than 25% at 1-, 3-, or 6-month interval; or by more than 50% at the 1-year interval, an open biopsy is recommended. A bone island should not grow at such an accelerated rate, and the possibility of a more ominous lesion, such as an osteosarcoma or a metastasis, must be considered.*"

25. When being asked by us, the Defendant accepted that when comparing the serial pelvic x-ray films taken on 8 September 2003 and 13 January 2004, he noticed that the diameter of the lesion in the Patient's right ilium had increased from 11 mm to 13 mm. This represented some 18.2% increase in diameter. He also accepted that some of the lesions identified by Dr LOK could not be seen from the serial x-ray films.

26. We agree with Dr CHIEN that (i) clear demarcated margins, (ii) homogeneity in density and (iii) absence of evidence of bone formation or destruction are key features for distinguishing benign bone islands from malignant bone metastases. When being asked by us, Dr CHIEN also accepted that some of the sclerotic lesions could not be seen from the serial pelvic x-ray films.

27. We appreciate that the lesion in the Patient's right ilium might well be consistent with a benign bone island, but in our view, it is a quantum leap for the Defendant to work on the assumption that all the lesions identified by Dr LOK were of the same nature. This is particularly true when Dr CHIEN

also accepted from reading the medical literature provided by the defence to us that multiple bone islands are rare.

28. We need to bear in mind that in making a differential diagnosis, the doctor must take into account the degree of risk faced by the patient and the seriousness of the consequences of the risk should it materialize [see: *Jones on Medical Negligence* (5th ed.) at para. 4-036].

29. The differential diagnosis of bone metastases carried in our view far more significant clinical implications than bone islands. Unlike bone islands, which should remain static in size or show very slow growth, we agree with Dr TSE, the Secretary's expert, that development of bone metastases is unpredictable and may progress rapidly.

30. When being asked by us, the Defendant told us that the words "*cause ascertained*" in the consultation notes of 10 October 2003 were wrong. They should read "*cause [could not be] ascertained*". When being cross-examined, the Defendant told us that he had the differential diagnosis of bone metastases in mind at the first consultation on 10 October 2003. He also told us that his management plan at that time was to discharge the Patient on subsequent follow up if there was no change.

31. There is no dispute that "*multiple small focal increased uptake*" were showed on additional sites in the second bone scan of 9 January 2004 "*suggestive of disease progression*". Furthermore, "*very mild increased uptake foci are suspected at T12 (body), L1 (right pedicle), L2 (right pedicle and body) & L4 (body) on SPECT of the thoracolumbar spine.*"

32. It follows in our view that Dr LOK's advice in his second Examination Report for "*more investigations to rule out bony metastases with unknown underlying malignancy*" should not be lightly disregarded. The Defendant should follow up with Dr LOK on why he mentioned in the bone scan report of 9 January 2004 that the "*[b]one scan findings are suggestive of disease progression*". And yet, he never did so.

33. The law in this regard was clearly stated by Hewak J in *Rietze v Bruser (No. 2)* [1979] 1 WWR 32 at 46-47:

"*In dealing with the question of diagnosis, the law states clearly that, where a medical practitioner uses reasonable skill and judgment in diagnosing the*

plaintiff's condition in consultation with other practitioners (where the situation reasonably requires consultation), he will not be held liable for the consequences of a mistaken diagnosis…

However, there is a distinction, in my view, between a case where all reasonable skill and judgment in diagnosing has been followed and a faulty diagnosis arrived at and one where all reasonable skill and judgment has not been exercised, resulting in a faulty diagnosis. It is not sufficient, in my view, for a medical practitioner to say, "Of the two or three probable diagnoses I have chosen diagnosis A over diagnosis B or C." It must be expected that the practitioner would choose diagnosis A over B or C because all of the facts available to that practitioner and all of the methods available to check the accuracy of those facts and that diagnosis have been exercised, with the result that diagnosis A remains as the most probable of all…"

34. In our view, the Defendant's approach in ruling out the differential diagnosis of bone metastases at the end of the second consultation was flawed.

35. We agree with Dr CHIEN that results of haematological and chemical pathological investigations, particularly, ALP [alkaline phosphatase], calcium and phosphate levels were important considerations in distinguishing benign bone islands from malignant bone metastases. In our view, the Defendant ought to have repeated the blood tests of 8 September 2003 before ruling out the differential diagnosis of bone metastases at the end of the second consultation on 6 February 2004. And yet, he never did so. It was wrong for the Defendant to work on the assumption that the Patient's ALP, calcium and phosphate levels were still within normal ranges on that day.

36. Dr CHIEN emphasized that there was no evidence of primary carcinoma. However, the real point is that the Defendant made no attempt to look for primary carcinoma. It is well-known in medicine that bone metastases in male patients are often associated with primary carcinoma in lungs, prostate, thyroid, colon and kidney. Accordingly, the Defendant ought to have arranged for further investigations in this respect before ruling out the differential diagnosis of bone metastases. And yet, he never did so.

37. In view of the Patient's second bone scan on 9 January 2004, which showed "*multiple small focal increased uptake*" on additional sites in the second bone scan report "*suggestive of disease progression*", the Defendant ought in our view to have made a differential diagnosis of bone metastases at the end of the

second consultation on 6 February 2004.

38. For these reasons, the Defendant had in our view by his conduct fallen below the standards expected of registered medical practitioners in Hong Kong. Accordingly, we find the Defendant guilty of disciplinary charge (A)(i).

39. Turning to disciplinary charge (A)(ii), despite Dr LOK's findings or advice of disease progression and to undertake more investigations to rule out bone metastases with unknown underlying malignancy, the Defendant merely wrote down on 6 February 2004 the following consultation notes in the Outpatient Progress Sheet:

> "*No bone pain*
> *bone scan done*
> *X-ray:* ↑ *size of sclerotic lesion*
> *FU (follow-up) X-ray*"

40. It is clearly stated in section 1.1.2 of the Professional Code and Conduct (2000 edition) that:

> "… *All doctors have a responsibility to maintain clear, accurate, adequate and contemporaneous medical records of their patients. Systematic record keeping helps in ensuring patients' problems are followed and properly looked after.*"

41. And yet, the Defendant did not mention in the consultation notes that he was referring to the increase in size of the lesion in the Patient's right ilium and let alone by how much the size had increased.

42. By leaving the case to the next doctor to review the Patient's condition in such an improper and inappropriate manner, the Defendant had by his conduct fallen below the standards expected of registered medical practitioners in Hong Kong. Accordingly, we find him guilty of disciplinary charge A(ii).

43. With regard to disciplinary charge (B), we disagree with Dr CHIEN that there was no immediate need or urgency for the Defendant to arrange for investigations to rule out aggressive lesions or multiple bone metastases. We agree with Dr TSE that "*for a patient with multiple sclerotic lesions in skeletal system and increased activity seen on bone scan, multiple bony metastases has to be assumed until proven otherwise.*"

44. It is clear to us from reading the consultation notes of 10 October 2003 that the Defendant planned to discharge the Patient on subsequent follow up if there was no change. Given the change of circumstances occasioned by the second bone scan suggestive of disease progression, it was imperative in our view for the Defendant to order further blood tests and other investigations to rule out the differential diagnosis of bone metastases.

45. In failing to arrange immediate or urgent investigations to rule out aggressive lesions or multiple bone metastases when the circumstances so warranted, the Defendant had in our view by his conduct fallen below the standards expected of registered medical practitioners in Hong Kong. Accordingly, we also find the Defendant guilty of disciplinary charge (B).

Sentencing

46. The Defendant has a clear disciplinary record.

47. We bear in mind that the primary purpose of a disciplinary order is not to punish the Defendant but to protect the public from persons who are unfit to practise medicine and to maintain public confidence in the medical profession by upholding its high standards and good reputation.

48. We appreciate that the Defendant was charged for something which happened some 17 years ago. And we accept that the Defendant was at all material times a junior O&T specialist.

49. However, we have grave concerns about the Defendant's lack of insight into his wrongdoings. When being asked by us, the Defendant replied that if given another chance, he would treat the Patient in exactly the same way. Apparently, he still failed to appreciate his limitations. We need to ensure that the Defendant will not commit the same or similar breach in the future.

50. Taken into consideration the nature and gravity of the amended disciplinary charges and what we have heard and read in mitigation, we order in respect of disciplinary charges (A)(i) and (B) that the Defendant's name be removed from the General Register for a period of 6 months. We further order that the removal order be suspended for a period of 36 months.

51. We also order in respect of disciplinary charge (A)(ii) that a warning letter be issued to the Defendant.

Remark

52. The name of the Defendant is included in the Specialist Register under the Specialty of Orthopaedics & Traumatology. It is for the Education and Accreditation Committee to consider whether any action should be taken in respect of his specialist registration.

Prof. LAU Wan-yee, Joseph, SBS
Chairperson of the Inquiry Panel
The Medical Council of Hong Kong