

Response to a mother's concern about radiation from repeated X-rays after her son's forearm fracture



Assume that today's date is 23 October 2026. You received Ms Perera's letter on 19 October 2026. You are Joanne Ashby, a senior radiographer in the Medical Imaging Department. Using the information in the case notes, write a letter to Ms Jing Perera, the mother of your patient Benedict Herath, replying to her concern about the X-rays her son has had. Explain why each X-ray was needed, what the radiation dose means and how the dose is kept low. Address the letter to Ms Jing Perera, Unit 3, 27 Banksia Avenue. In your answer: expand the relevant notes into complete sentences; do not use note form; use letter format. The body of the letter should be approximately 180–200 words.

Choose one box per line: I = Include / C = Compress / O = Omit. Answers and reasons are on the webpage (scan QR).

	I	C	O		I	C	O
Patient details				Fracture and imaging			
1. Patient: Benedict Herath, DOB 14/03/2020 (6 yrs)	☐	☐	☐	19. X-ray 3 (01/09, 1/52): check position maintained in cast — manipulated fractures can slip in first wks; satisfactory	☐	☐	☐
2. Mother: Ms Jing Perera, Unit 3, 27 Banksia Avenue	☐	☐	☐	20. X-ray 4 (06/10, 6/52): confirm sufficient healing for cast removal — healed well; gentle everyday activities permitted, return to sport according to fracture-clinic advice	☐	☐	☐
3. Imaging requested by: ED doctors, then fracture clinic (orthopaedics)	☐	☐	☐	21. Each exam: 2 views of forearm only; no images had to be repeated	☐	☐	☐
Mother's letter (received 19/10/26)				22. X-ray 3 taken by student radiographer under direct supervision	☐	☐	☐
4. Worried 4 X-rays in 2/12 may be harmful; asks if cancer risk ↑	☐	☐	☐	23. Pt upset during X-ray 3; settled with sticker	☐	☐	☐
5. Asks whether all X-rays were really necessary	☐	☐	☐	Radiation dose			
6. Asks whether son should avoid future X-rays (e.g. at dentist)	☐	☐	☐	24. Forearm X-ray = very low dose; each ≈ < 1 day of natural background radiation (from soil, air, food); all 4 together ≈ a few days' worth	☐	☐	☐
7. Says pt's father 'thinks hospitals over-test'; parents separated, disagree about pt's care	☐	☐	☐	25. Forearm far from radiation-sensitive organs → risk to pt extremely small; benefit of each X-ray far outweighs risk	☐	☐	☐
8. Also complains hospital car park fees too high	☐	☐	☐	26. Children more sensitive to radiation than adults → extra care always taken	☐	☐	☐
Social background				Dose reduction			
9. Lives with mother and older sister (9 yrs)	☐	☐	☐	27. Each X-ray requested by doctor only when result would guide treatment	☐	☐	☐
10. Year 1 student; plays junior soccer on weekends	☐	☐	☐	28. Child-specific low exposure settings; X-ray beam limited to forearm only; modern digital equipment	☐	☐	☐
11. Mother works part-time as pharmacy assistant	☐	☐	☐	Plan			
Medical history				29. Fracture clinic: no further X-rays planned unless new symptoms	☐	☐	☐
12. Mild asthma — salbutamol PRN	☐	☐	☐	30. Future X-rays (incl. dental) should not be avoided if recommended by doctor/dentist — benefit > risk	☐	☐	☐
13. Nil other significant hx; allergies: nil known	☐	☐	☐	31. Final fracture clinic review 03/11/26	☐	☐	☐
14. Routine dental X-rays 2025	☐	☐	☐	32. Offer phone discussion — Medical Imaging reception, Mon–Fri 8 am–5 pm	☐	☐	☐
Fracture and imaging							
15. 25/08/26 fell from trampoline → L distal forearm fracture (radius + ulna), displaced	☐	☐	☐				
16. X-ray 1 (25/08, ED): confirmed fracture, showed bones out of position	☐	☐	☐				
17. Fracture manipulated (straightened) under sedation in ED; above-elbow cast applied	☐	☐	☐				
18. X-ray 2 (25/08, after manipulation): check bones in good position — satisfactory	☐	☐	☐				