Diagnostic X-ray Testing Frequency Guidelines

ORS G1

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# Introduction

This compliance guide is advisory only. Its purpose is to provide information for managing entities, radiation practitioners, manufacturers/suppliers and service engineers on the activities associated with radiological equipment used for diagnostic X‑ray procedures. It gives testing frequencies for a range of X-ray equipment used in procedures covered by the Code of Practice for Dental Radiology (ORS C4) and the Code of Practice for Diagnostic and Interventional Radiology (ORS C1).

The Director for Radiation Safety (the Director) at the Office of Radiation Safety (ORS) issued this compliance guide on xx/xx/2021.

## Contact

The Director’s contact details are:

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# Testing frequency

|  |  |  |  |
| --- | --- | --- | --- |
| **Type of equipment** | **Primary** | **Secondary** | **Reference(s)** |
| Intra oral X-ray[[1]](#footnote-1) | Three yearly (C4 and Causer) | NA | Causer DA et al (2005)  ORS C4 |
| Panoramic dental unit1 | Three yearly (C4) | Yearly or two yearly (Causer) | Causer DA et al (2005)  ORS C4 |
| Cephalometric dental units1 | Three yearly (C4) | Yearly or two yearly (Causer) | Causer DA et al (2005)  ORS C4 |
| Mammography | Yearly | NA | Heggie JCP et al (2017) – adopted by the Royal Australian and New Zealand College of Radiologists |
| Computed tomography (CT) and cone beam CT[[2]](#footnote-2) | Yearly | Six monthly | Causer DA et al (2005)  Holroyd JR, Walker A (2010) – listed on Institute of Physics and Engineering and Medicine website |
| Fluoroscopic X-ray apparatus (fixed, mobile and benchtop) | Yearly | Six monthly | Causer DA et al (2005) |
| General radiographic apparatus | Two yearly | Yearly | Causer DA et al (2005) |
| Dual energy X-ray absorptiometry (DEXA) | Three yearly | NA | Causer DA et al (2005) |

# References

Causer DA, Einsiedel P, Heggie JC, et al. 2005. ACPSEM Position Paper: Recommendations for a technical quality control program for diagnostic X-ray equipment. *Australasian Physical & Engineering Sciences in Medicine* 28(2): 69–75. <https://doi.org/10.1007/BF03178696>.

Heggie JCP, Barnes P, Cartwright L, et al. 2017. ACPSEM Position Paper: Recommendations for a digital mammography quality assurance program V4.0. *Australasian Physical & Engineering Sciences in Medicine* 40(3): 491–543. DOI: 10.1007/s13246-017-0583-x.

Holroyd JR, Walker A. 2010. *Recommendations for the Design of X-ray Facilities and the Quality Assurance of Dental Cone Beam CT (Computed Tomography) Systems*. Health Protection Agency Radiation Protection Division. <https://www.ipem.ac.uk/Scientific-Journals-Publications/Free-Publications>.

Ministry of Health. 2018. *Code of Practice for Dental Radiology: ORS C4*. Wellington Ministry of Health. <https://www.health.govt.nz/publication/code-practice-dental-radiology-ors-c4>.

1. Traditionally done by a service engineer. [↑](#footnote-ref-1)
2. Including positron emitted tomography (PET) CT, single-photon emission computed tomography (SPECT) CT and planning CT when also used for diagnostic radiology. [↑](#footnote-ref-2)