

Review [Cancer Radiother.](#) 2025 Oct 14;29(7-8):104756. doi: 10.1016/j.canrad.2025.104756.

Online ahead of print.

Guide for paediatric radiotherapy procedures: 2025 update

[Line Claude](#)¹, [Jordan Bouter](#)², [Farid Goudjil](#)³, [Emmanuel Jouglar](#)⁴, [Valentine Martin](#)⁵,
[Luc Ollivier](#)⁶, [Marie Cantaloube](#)⁷, [Laetitia Padovani](#)⁸, [Anne Laprie](#)⁹;
[Groupe français de radiothérapie pédiatrique \(the French group of paediatric radiotherapy\)](#)

Affiliations

PMID: 41092503 DOI: [10.1016/j.canrad.2025.104756](https://doi.org/10.1016/j.canrad.2025.104756)

Abstract

A third of children with cancer receive radiotherapy as part of their initial treatment, which represents 800 paediatric irradiations per year in France, carried out in 15 specialized centres approved on the recommendations of the Institut national du cancer (the French national cancer institute). The treatment guidelines follow the recommendations of the Société française de lutte contre les cancers et les leucémies de l'enfant et de l'adolescent (SFCE; the French society for childhood cancers) or the French and European prospective protocols. The therapeutic indications, the technical and ballistic choices for complex cases are frequently discussed during bimonthly paediatric radiotherapy technical webconferences. With an overall survival being 80 % for all cancers combined, long-term toxicity logically becomes a major concern, making the treatments preparation complex. Irradiation methods include all the techniques currently available: intensity-modulated radiotherapy, stereotactic irradiation delivered in either standard or hypofractionated protocols, brachytherapy and proton therapy. We present the update of the recommendations of the Société française de radiothérapie oncologique (the French society for radiation oncology) on the indications, the technical methods of realization and the organisation and the specificities of paediatric radiation oncology.

Keywords: Brain tumour; Cancers de l'enfant; Ewing's sarcoma; Guidelines; Neuroblastoma; Neuroblastome; Paediatric cancer; Protontherapy; Protonthérapie; Radiotherapy; Radiothérapie; Recommendations; SFRO; Société française de radiothérapie oncologique; Tumeurs cérébrales, Sarcome d'Ewing.

Copyright © 2025. Published by Elsevier Masson SAS.

[PubMed Disclaimer](#)