

Evolution of radiotherapy treatment favoring the quality of life of patients diagnosed with oral cancer

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Opinion

Radiotherapy is the adjuvant treatment for oral cavity tumors responsible for improved local control and longer recurrence-free survival.¹⁻³ Initially proposed for advanced tumors such as pT3-4 and multiple positive lymph nodes, its indication has currently expanded due to increased knowledge of additional minor factors that also contribute to higher recurrence rates.⁵⁻¹¹ These factors, which will likely be complemented by others as our knowledge advances, include vascular and lymphatic invasion and, most importantly, depth of invasion (DOI), which indicate the need for irradiation with the aim of improving recurrence-free survival.⁵ However, both radiotherapy alone and, even more so, chemoradiotherapy are associated with high morbidity related to treatment and may even contribute to increased mortality from non-oncologic causes.⁴

Modern irradiation techniques, beginning with the already well-established IMRT, provide opportunities for both early and late reduction of xerostomia, reduced dose exposure to the laryngeal constrictor muscles, and reduced dose exposure to the skin and bone (essential for preventing osteoradionecrosis of the jaws), without compromising dose delivery to the therapeutic target. Advanced IMRT delivery techniques can define treatment volumes with additional precision, further enhancing the benefits already associated with IMRT.

The use of particle irradiation, such as proton therapy, has shown promising results in certain tumor types, including oropharyngeal cancer, where it has demonstrated noteworthy benefits such as reducing the need for feeding tubes.

In these scenarios, eliminating irradiation as a tool for improving the quality of life of patients with oral cavity cancer has not been considered. However, one highly desirable possibility would be to eliminate the need for radiotherapy altogether. This opportunity may be achieved through early diagnosis and, eventually, through dose de-escalation in cases of complete pathological response following neoadjuvant therapies.⁶⁻⁸ Data on complete responses to neoadjuvant systemic treatments have been evaluated in various settings and will likely make this scenario more favorable.⁹⁻¹⁰ Nevertheless, the evolution of oncologic treatments must not lose sight of patients' quality of life.

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Conflicts of interest

None.

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