

# Adenoid cystic carcinoma of trachea treated with adjuvant hypofractionated tomotherapy. Case report and literature review

Filippo Alongi<sup>1</sup>, Nadia Di Muzio<sup>1</sup>, Micaela Motta<sup>1</sup>, Sara Broggi<sup>2</sup>, Elena De Martin<sup>2</sup>, Angelo Bolognesi<sup>1</sup>, Mauro Cattaneo<sup>2</sup>, Riccardo Calandrino<sup>2</sup>, and Ferruccio Fazio<sup>1,3-5</sup>

<sup>1</sup>Department of Radiation Oncology, <sup>2</sup>Department of Medical Physics, and <sup>3</sup>Department of Nuclear Medicine, Istituto Scientifico Fondazione San Raffaele, Milan; <sup>4</sup>University of Milano-Bicocca, Milan; <sup>5</sup>IFM-CNR, Milan, Italy

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## ABSTRACT

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Adenoid cystic carcinoma, also called cylindroma, is the second most common histological type of tracheal malignancy but represents 1% of all respiratory tract cancers. We report a case of a 59-year-old patient submitted to an incomplete resection of the trachea and subsequently treated with adjuvant tomotherapy. There have been no reports in the literature regarding intensity-modulated radiation therapy with linac or tomotherapy systems in adenoid cystic carcinoma of the trachea.

The present clinical case demonstrates the feasibility of adjuvant intensity-modulated radiation therapy techniques for optimizing the dose coverage of the tumor bed while sparing surrounding normal tissues. A dosimetric comparison between the tomotherapy plan and a 3-dimensional conformal radiotherapy plan is also reported. We demonstrate that tomotherapy permits an increase in the dose per fraction without important acute adverse effects. At 24 months' follow-up, our patient shows no evidence of disease with negative histological findings.

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**Key words:** adenoid cystic carcinoma, hypofractionation, tomotherapy.

Correspondence to: Dr Filippo Alongi, Istituto Fondazione San Raffaele, Radioterapia, Via Olgettina 60, 20132 Milano, Italy.  
e-mail [filippoalongi@libero.it](mailto:filippoalongi@libero.it)  
or [filippo.alongi@hsr.it](mailto:filippo.alongi@hsr.it)

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