

ONCODAILY MEDICAL JOURNAL

abstract

Institutional Experience of Adjuvant Radiotherapy for Lacrimal Gland Adenoid Cystic Carcinoma: Balancing Tumor Control and Organ Preservation

**Fabiha Shakeel, Bilal Mazhar Qureshi, Bilal Ahmed,
Sarah akhter, Laraib Khan**

DOI: 10.69690/ODMJ-018-3101-6797

AMSTRO

Asia and Middle East Society of
Therapeutic Radiation and Oncology

Affiliated with ASTF

Asia and Middle East Society for Radiation Therapy and Oncology, 2026

abstract

Institutional Experience of Adjuvant Radiotherapy for Lacrimal Gland Adenoid Cystic Carcinoma: Balancing Tumor Control and Organ Preservation

Author: Fabiha Shakeel¹, Bilal Mazhar Qureshi¹, Bilal Ahmed¹, Sarah akhter¹, Laraib Khan¹

Affiliation: ¹The Aga Khan University Hospital, Karachi

DOI: [10.69690/ODMJ-018-3101-6797](https://doi.org/10.69690/ODMJ-018-3101-6797)

Introduction: Adenoid cystic carcinoma (ACC) of the lacrimal gland is a rare but aggressive malignancy characterized by perineural invasion, local recurrence, and late distant metastasis. Optimal management remains debated, though combined surgery and adjuvant radiotherapy is widely advocated for high-risk disease.

Case Description: We report a 56-year-old male who presented with progressive left orbital swelling and ptosis. Imaging demonstrated a bulky lacrimal gland mass abutting the globe and extraocular muscles. Histopathology following excisional biopsy confirmed high-grade ACC with solid pattern and perineural invasion. Staging FDG PET/CT revealed no distant disease.

The patient received adjuvant radiotherapy to a total dose of 66 Gy in 33 fractions using a sequential VMAT technique. Target volumes were delineated using fused pre- and postoperative MRI, incorporating neural pathways at risk. Strict dose constraints were applied to the optic apparatus.

Treatment was well tolerated, with only mild acute periorbital erythema and no visual or neurological toxicity.

Conclusion: This case highlights the importance of precision adjuvant radiotherapy in managing high-risk lacrimal gland ACC. Conformal dose escalation enabled optimal target coverage while preserving visual function, supporting eye-sparing strategies in carefully selected patients.

Conflict of interests: The authors declare no conflict of interests.

Funding: This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

License: © The Author(s) 2026. This is an open access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, and

unrestricted adaptation and reuse, including for commercial purposes, provided you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if changes were made. To view a copy of this license, visit <https://creativecommons.org/licenses/by/4.0/>.