# MULTIMODAL REHABILITATION TREATMENTS FOR THE MANAGEMENT OF TEMPOROMANDIBULAR DISORDERS IN HEAD AND NECK CANCER PATIENTS: A SYSTEMATIC REVIEW

**Marco Monticone[1], Matteo Pellegrini[2], Anita Groppi[2], Andrea Pibiri[1], Barbara Rocca[3], Federico Solla[3], Andrea Scribante[2]**

[1] University of Cagliari, Italy
[2] University of Pavia, Italy
[3] Lenval University Children›s Hospital, France
e-mail: marco.monticone@unica.it

## Background and Aims

Temporomandibular disorders (TMD) in patients with head and neck cancer (HNC) are understudied, particularly regarding multimodal rehabilitation (MR) treatments aimed at functional recovery, pain reduction, and quality of life (QoL) improvement. This systematic review (SR) evaluates the role of MR interventions in addressing these outcomes.

## Methods

Eligible studies included randomized controlled trials (RCTs) and observational studies involving HNC patients with TMD, undergoing MR treatments. Outcomes considered were mandibular mobility (Maximum Interincisal Opening, MIO), pain intensity (0-100 Visual Analogue Scale, VAS), and QoL (0-100 University of Washington Quality of Life, UW-QOL; 0-148 Functional Assessment of Cancer Therapy – Head and Neck, FACT-HN). Exclusion criteria were non-English articles, duplicates, studies unrelated to the review's aim, non-motor interventions, ex vivo or animal studies, absence of Ethics Committee approval, and non-original studies. A systematic search was conducted across PubMed, Scopus, and Web of Science (1990–2024). Evidence quality was assessed using the National Heart, Lung, and Blood Institute tools, and risk of bias (RoB) with the RoB in the Non-Randomized Studies of Interventions Version 2 tool for observational studies, and the Cochrane RoB tool for RCTs. Data extraction covered study design, patient characteristics, interventions, and outcomes.

## Results

Of 257 articles, 7 met the criteria (3 observational studies, 4 RCTs; 340 patients). Studies showed a RoB ranging from low to high and evidence quality from fair to good. MIO improved by an average of 10 mm, pain intensity decreased by 15–20%, and QoL improved significantly (UW-QOL by 25–30 points; FACT-HN by 20–25 points).

## Conclusion

Despite study heterogeneity and short-term follow-up, MR appears effective in improving mandibular function, reducing pain, and enhancing QoL in HNC patients with TMD.
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