

Emerging understanding of dosimetric factors impacting on dysphagia and nutrition following radiotherapy for oropharyngeal cancer

Bena Cartmill, BSpPath, Hons, PhD,¹ Petrea Cornwell, BSpPath Hons, PhD,² Elizabeth Ward, BSpThy Hons Grad Cert Ed, PhD,³ Wendy Davidson, BSc, Grad Dip Nutr Diet, Master Appl Sc Res,⁴ Rebecca Nund, BSpPath Hons,⁵ Catherine Bettington, BSc, MBBS,⁶ Reza Masoud Rahbari, BSc, MBBS,⁷ Michael Poulsen, MBBS, FRANZCR, MD,⁸ Sandro Porceddu, BSc, MBBS, FRANZCR, MD^{6,8}

¹The University of Queensland, Division of Speech Pathology, and Speech Pathology Department, Princess Alexandra Hospital, Woolloongabba, Queensland, Australia, ²Metro North Health Service District, Queensland Health, Australia, and Griffith Health Institute, Griffith University, Mt Gravatt, Queensland, Australia, ³Centre for Functioning and Health Research, Queensland Health, and The University of Queensland, Division of Speech Pathology, Buranda, Queensland, Australia, ⁴Dietetics Department, Princess Alexandra Hospital, Queensland Health, Woolloongabba, Queensland, Australia, ⁵The University of Queensland, Division of Speech Pathology and Centre for Functioning and Health Research, Queensland Health, Buranda, Queensland, Australia, ⁶Radiation Oncology Mater Centre, Queensland Health, South Brisbane, Queensland, Australia, ⁷Princess Alexandra Hospital, Queensland Health, Woolloongabba, Queensland, Australia, ⁸Radiation Oncology Department, The University of Queensland, School of Medicine, and Princess Alexandra Hospital, Queensland Health, Woolloongabba, Queensland, Australia.

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ABSTRACT: *Background.* Research has reported relationships between 3-dimensional (3D) radiation dose to head and neck structures and consequential swallowing/nutritional outcomes. However, this evidence is preliminary. The current study aimed to identify which reported dose constraints identified functional impairment at 6 months posttreatment.

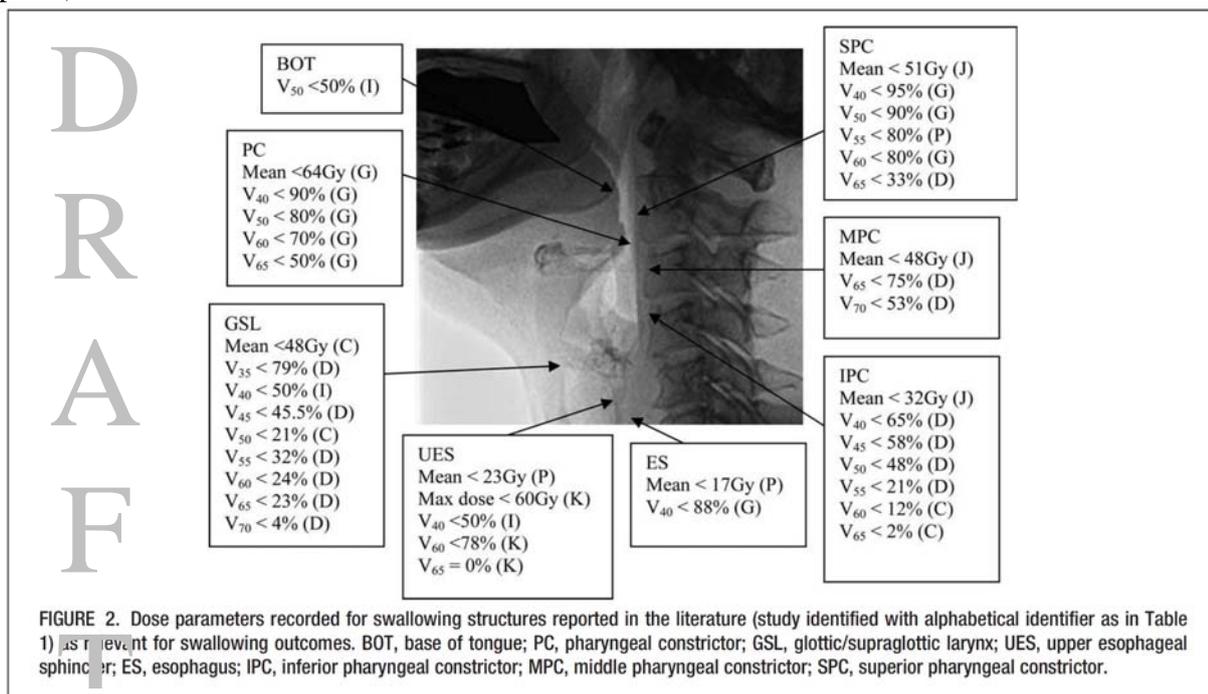
Methods. Dose constraints with reported relationships to swallowing and nutrition were identified through a systematic literature review. Dose–volume histograms for 12 patients with T1–T3 oropharyngeal cancer treated with 3D conformal radiotherapy determined dosages delivered to specific structures. Doses were examined in relation to published dose constraints and the swallowing and nutritional outcomes at 6 months posttreatment.

Results. In all, 66% of the reported mean, maximum, and partial doses to 8 structures correctly identified swallowing and nutrition outcomes at 6 months.

Conclusion. The relationships observed between known dosimetric constraints and functional outcomes highlight the potential for dosimetric data to assist in prognosis and treatment. Systematic research is required to refine dosimetric parameters and the impact on functional outcomes.
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KEY WORDS: radiation dosimetry, dose–volume histogram, oropharyngeal cancer, swallowing, nutrition, functional outcomes

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Comment: Articolo interessante: gli Autori analizzano un gruppo di pazienti con tumore dell'orofaringe e propongono una interessante analisi nel loro studio sul rapporto tra la disfagia/malnutrizione ed i constrains di dose delle strutture correlate con la deglutizione.

Presentano, quindi, una revisione sistematica della letteratura dalla quale sono stati selezionati alcuni lavori pubblicati tra il 2001 e il 2010 che mostrano in tabelle (di lettura intuitiva) una correlazione fra numerosi parametri dosimetrici quali la dose massima, media o parziale agli organi a rischio coinvolti nella deglutizione e il grado di tossicità post-trattamento.

Consigliata la lettura

Dr. Orietta Caspiani

Ospedale Fate bene fratelli.

Isola Tiberina

Roma