

# Outcomes of the contemporary management approach for locally advanced (T3-T4) laryngeal cancer: a retrospective cohort study

Amarkumar Rajgor<sup>1</sup>, Josh Cowley<sup>2</sup>, Colin Gillespie<sup>2</sup>, Chang Woo Lee<sup>1</sup>, James O'Hara<sup>1</sup>, Muhammad Shahid Iqbal<sup>1</sup>, and David Hamilton<sup>1</sup>

<sup>1</sup>Newcastle Upon Tyne Hospitals NHS Foundation Trust

<sup>2</sup>Newcastle University

April 30, 2022

## Abstract

**Background:** Our centre has favoured primary surgery over chemoradiotherapy(CRT) for specific advanced laryngeal cancer patients with large volume tumours, airway compromise, significant dysphagia and T4 disease. Some reports suggest surgery is associated with higher oncological control than organ-preservation strategies. This study reports the survival outcomes for a modern, high-volume head and neck centre favouring surgical management approaches. **Methods:** Patient data was collated retrospectively over a 7-year period from a tertiary head and neck specialty centre. Kaplan-Meier survival analysis and the Cox-proportional hazards model were employed for survival analyses. **Results:** The study population included 121 patients with T3(n=76) or T4(n=45) laryngeal cancer with a mean follow-up of 2.9 years. 104(86.0%) patients were treated with curative intent. Of which, 14(11.6%) received radiotherapy, 40(33.1%) received chemoradiotherapy (CRT), 19(15.7%) underwent surgery alone and 31(25.6%) underwent surgery with adjuvant therapy. In the cohort treated with curative intent, the 2-year and 5-year estimated disease-specific survival was 77.9% and 64.1% respectively. CRT had the highest 2-year DSS(92.5%), followed by surgery with adjuvant therapy(81.8%), RT alone(75%) and surgery alone(72.4%). Prognostic factors identified for disease-specific survival included age, tumour subsite and treatment modality. **Conclusion:** For a centre favouring primary surgery for certain advanced laryngeal cancers, the DSS appears no higher than published literature. The DSS following CRT is encouraging and we postulate that more of our patients may have benefitted from this treatment. To truly enhance survival, future research needs to move away from identifying treatment superiority and focus on precision medicine to define treatment pathways in this disease.

## Hosted file

Manuscript without the title page and with the abstract.docx available at <https://authorea.com/users/479663/articles/567383-outcomes-of-the-contemporary-management-approach-for-locally-advanced-t3-t4-laryngeal-cancer-a-retrospective-cohort-study>

## Hosted file

Figure 1.docx available at <https://authorea.com/users/479663/articles/567383-outcomes-of-the-contemporary-management-approach-for-locally-advanced-t3-t4-laryngeal-cancer-a-retrospective-cohort-study>

## Hosted file

Figure 2.docx available at <https://authorea.com/users/479663/articles/567383-outcomes-of-the-contemporary-management-approach-for-locally-advanced-t3-t4-laryngeal-cancer-a-retrospective-cohort-study>

### Hosted file

Table 1.docx available at <https://authorea.com/users/479663/articles/567383-outcomes-of-the-contemporary-management-approach-for-locally-advanced-t3-t4-laryngeal-cancer-a-retrospective-cohort-study>

### Hosted file

Table 2.docx available at <https://authorea.com/users/479663/articles/567383-outcomes-of-the-contemporary-management-approach-for-locally-advanced-t3-t4-laryngeal-cancer-a-retrospective-cohort-study>

### Hosted file

Table 3.docx available at <https://authorea.com/users/479663/articles/567383-outcomes-of-the-contemporary-management-approach-for-locally-advanced-t3-t4-laryngeal-cancer-a-retrospective-cohort-study>

### Hosted file

Table 4.docx available at <https://authorea.com/users/479663/articles/567383-outcomes-of-the-contemporary-management-approach-for-locally-advanced-t3-t4-laryngeal-cancer-a-retrospective-cohort-study>