

Establishing and integrating a trans-oral robotic program into routine oncological management of head and neck cancer - A UK perspective

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Introduction

Transoral robotic surgery (TORS) is being adopted worldwide for minimally-invasive treatment of malignancy and, now, benign pathologies (1). The introduction of a TORS program brings organizational, logistical and clinical challenges (2). We present our experience from a major UK NHS head and neck cancer center. We evaluate the program, looking at outcomes of 117 procedures undertaken since inception.

Methods

There was a 3-month planning phase prior to implementation. The strategy focused on four key domains: governance, logistics, training and multi-disciplinary team (MDT) awareness:

Domain	Example activities
Governance	- Trust Risk and Assurance Committee - Robotics Steering Committee - Patient information leaflets
Logistics	- Specific large theatre dedicated to robot use - Inter-speciality arrangements maximised use
Training	- Small, dedicated team disseminated experience - Simulator, wetlab, team site visits - Theatre dry-run including emergency de-dock
MDT awareness	Briefing for anaesthetists, speech and language therapists, histopathology, oncology, nursing

Results

A total of 107 patients underwent 117 TORS procedures between January 2018 and December 2020.

Figure 1a: Lesions for which procedures performed

- tonsil malignancy: lateral oropharyngectomy
- CUP included bilateral tonsillectomy, tongue-base mucosectomy

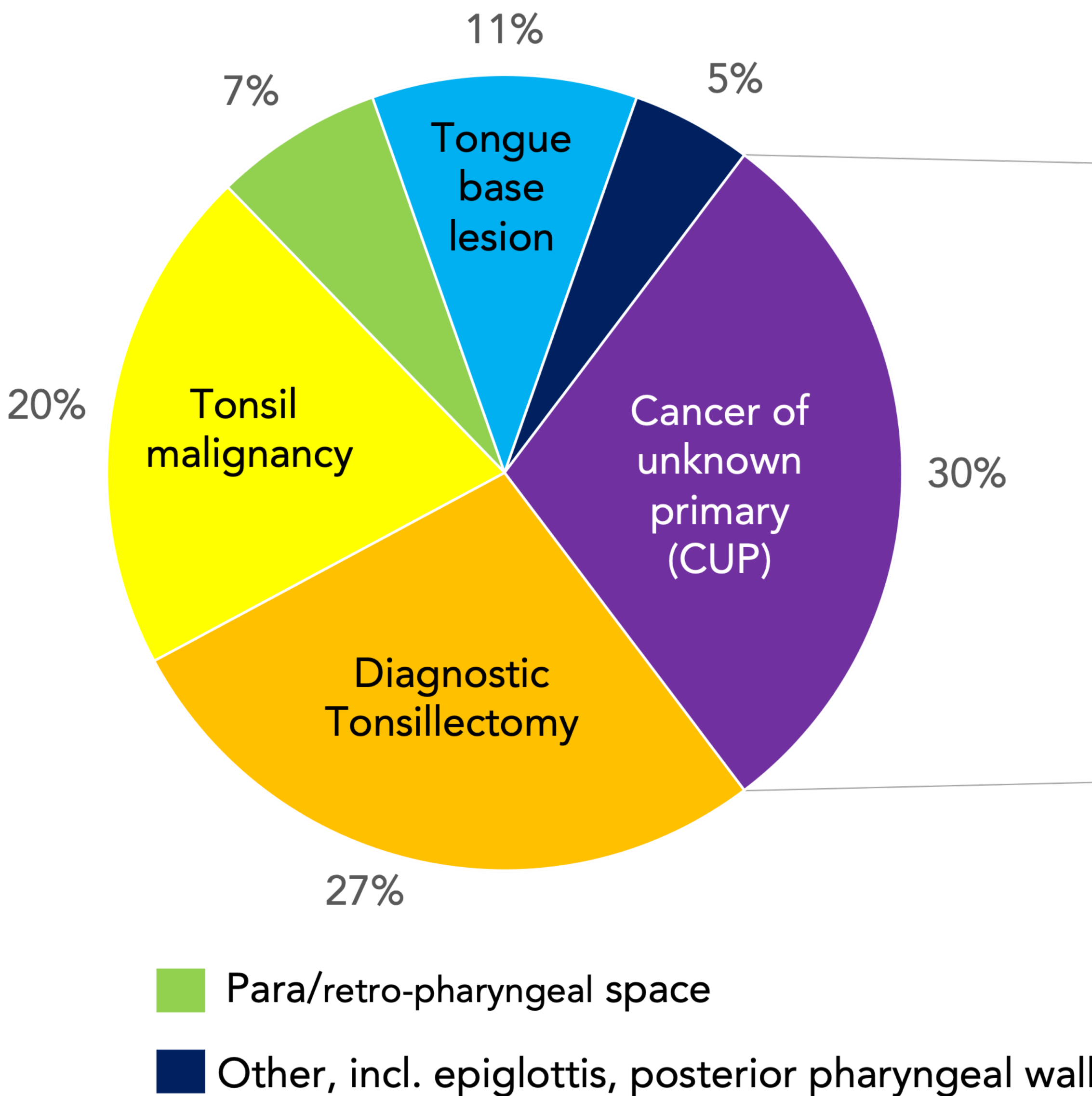
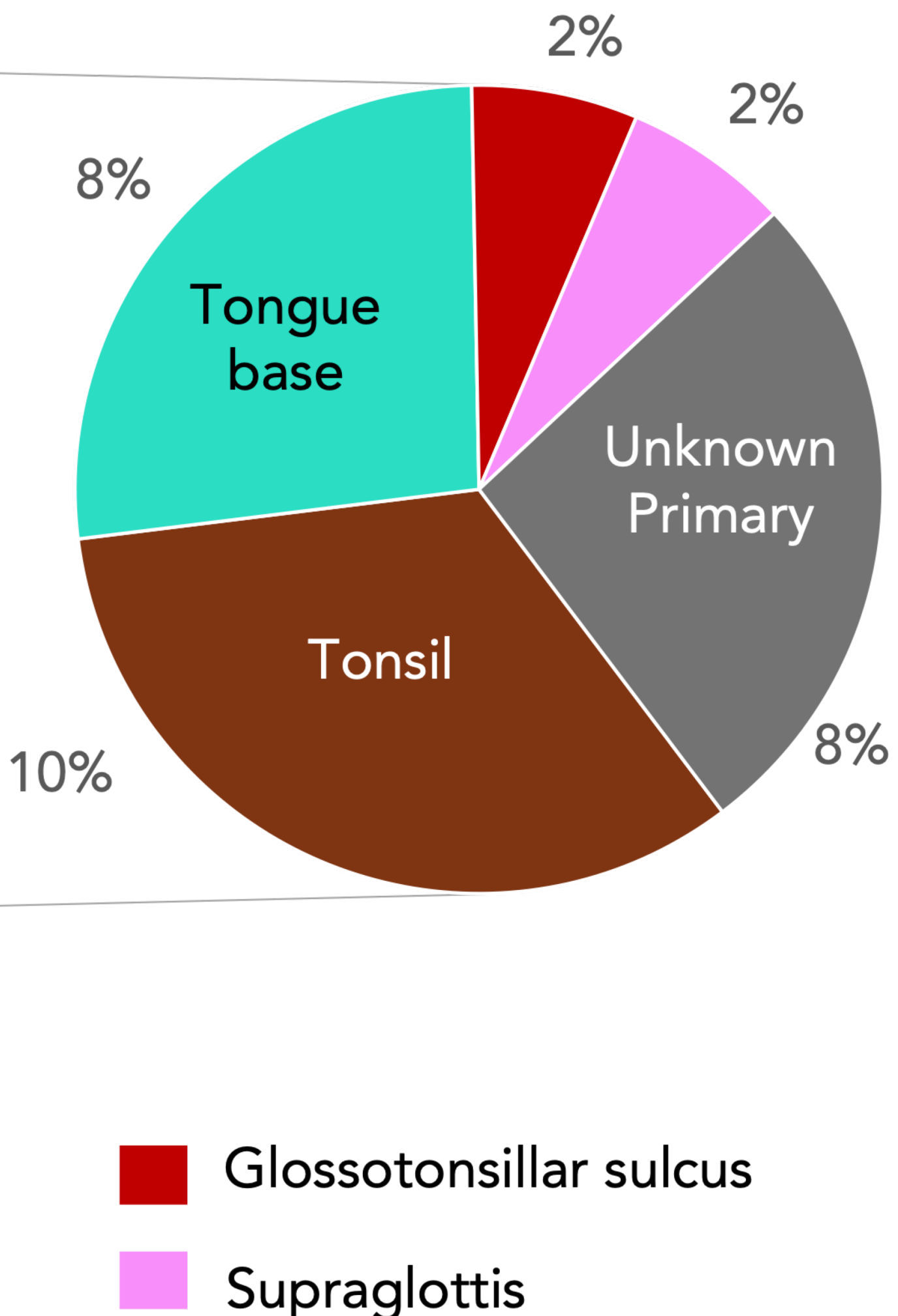


Figure 1b: Location of the primary tumour after performing diagnostic TORS for CUP



- Mean docking time: 5.34 minutes and console time: 56.33 minutes
- 7.7% patients re-admitted with post-operative bleeding
- 1.7% (n=2) had positive margins requiring re-resection
- Data from the first year showed:
 - Average length of stay was 2.5 days
 - Median MD Anderson Dysphagia Index score of swallowing function was 72.4 at 2 weeks (n=14); 65.6 at 1 month (n=11); and 68.2 at 3 months (n=10)

Conclusions

Introduction of TORS program is a complex challenge. Implementation can occur safely and efficiently, based on careful preparation. Integration into routine management can then accelerate. As a result, this center became one of the UK's busiest for TORS within only one year.

References

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- (2) Randell R, Greenhalgh J, Hindmarsh J, Dowding D, et al. 2014. Integration of robotic surgery into routine practice and impacts on communication, collaboration, and decision making: A realist process evaluation protocol. *Implement Sci.* 9(1):1-8.