

**Supplementary Table 1. Operations for T3 and T4 patients**

cT	cN	Operations	Flap
4a	2	Transoral robotic wide excision of BOT cancer (R), SND (R) (level II, III), (L) (level II, III, IV)	None
4a	2	Radical resection of oropharynx & BOT (R) via mandibular swing approach, MRND (B)	ALT free flap reconstruction
4a	2	Hemiglossectomy (R) (mandibulotomy approach), SND (R) (level I, II, III, IV)	RFFF reconstruction
4a	2	Robot assisted transoral oropharyngectomy (R), SND (R) (level II, III, IV)	None
3	2	Wide excision of soft palate cancer (L), MRND (L)	Rotation local flap reconstruction
4a	1	Wide excision of tonsil cancer (L) via lateral pharyngotomy approach, MRND (L)	RFFF reconstruction
4a	0	Wide excision of tonsil cancer (R) via lateral pharyngotomy approach (R), SOND (R)	RFFF reconstruction
4a	2	Transoral robot-assisted wide excision of tonsil cancer (R), RND (R)	None
3	2	Robot assisted transoral oropharyngectomy (R), SND (R) (level II, III, IV)	None
4a	0	Transoral robotic surgery (R), tonsillectomy (L)	None
3	2	Lateral oropharyngectomy (R), tonsillectomy (L), SND (R) (level II, III, IV, V)	None
4a	2	Wide excision of tonsil cancer (R) (mandible swing approach), extended RND (R)	RFFF reconstruction
4a	2	Transoral lateral oropharyngectomy (R), MRND type III (R)	None
3	2	Transoral lateral oropharyngectomy (R), tonsillectomy (L), extended RND (R), MRND type III (L)	None
4a	2	Total glossectomy, MRND type II (R), SND level I, II, III (L), TRAM reconstruction	TRAM free flap reconstruction

BOT: base of tongue, SND: selective neck dissection, MRND: modified radical neck dissection, SOND: supraomohyoid neck dissection, RND: radical neck dissection, ALT: anterolateral thigh, RFFF: radial forearm free flap, TRAM: transverse rectus abdominis myocutaneous, R: right, L: left, B: both