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Single-port robotic areolar thyroidectomy: technical feasibility and clinical outcomes of 64 consecutive cases

Myunghan Yu, Dongsik Bae, Jaewan Jeon, Kicheon Lee, Soohyeon Lee, Dohoon Koo

Corresponding author: Dohoon Koo (dohoon.koo.md@gmail.com), Department of Surgery, Inje University Haeundae Paik Hospital, Busan, Republic of Korea

Online Resource 1

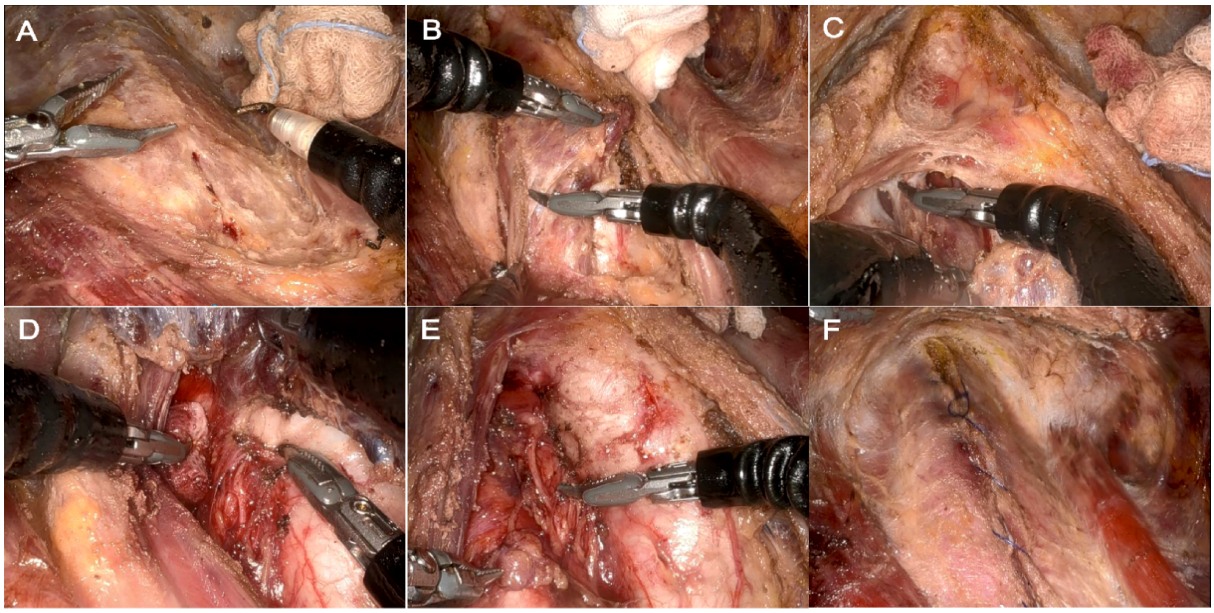

Fig. S1 Intraoperative sequence of single-port robotic areolar thyroidectomy: (a) Midline strap-muscle opening, (b) gland–strap muscle plane development, (c) superior pole vessel ligation, (d) ligament of Berry release, (e) parathyroid and recurrent laryngeal nerve preservation, (f) strap-muscle reapproximation

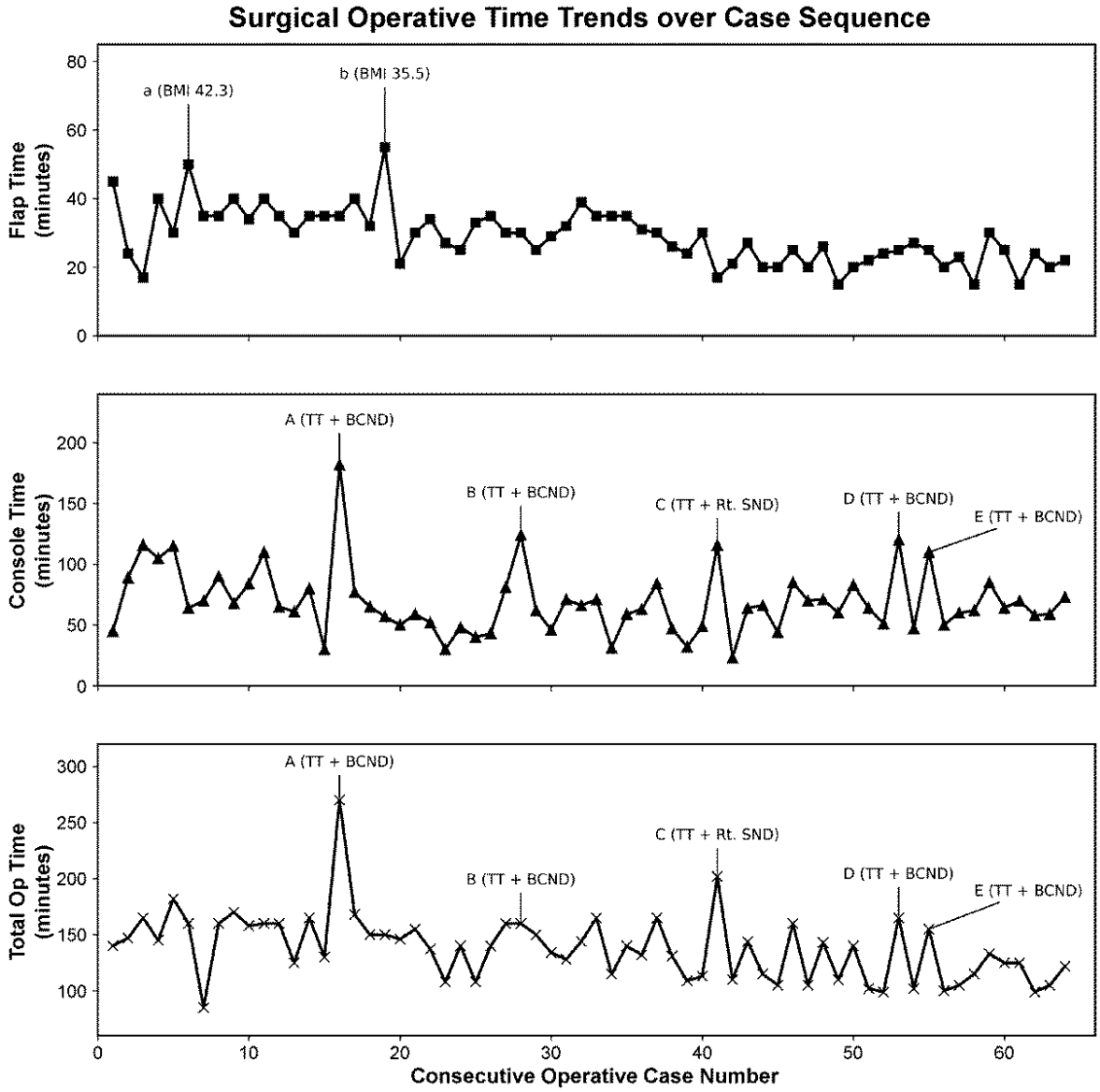

Fig. S2 Case-sequence trends in flap time (upper panel), console time (middle panel), and total operative time (lower panel), with selected patient and procedural characteristics annotated.

BMI, body mass index; TT, total thyroidectomy; BCND, bilateral central node dissection; SND, selective neck dissection

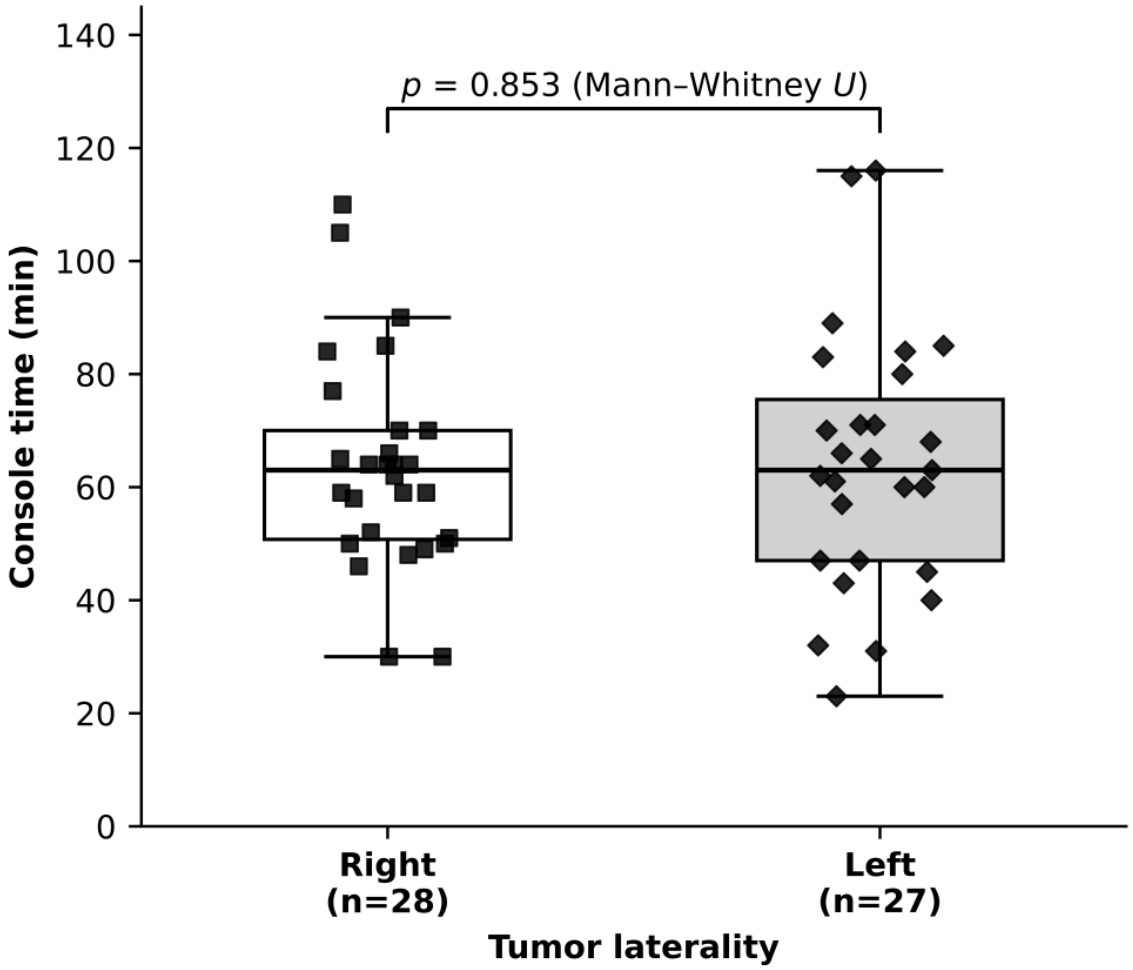

Fig. S3 Console time by tumor laterality in single-port robotic areolar (SPRA) thyroidectomy (right, n = 28; left, n = 27; isthmectomy and total thyroidectomy cases excluded). No significant difference was found between groups (Mann–Whitney U test, $p = 0.853$)

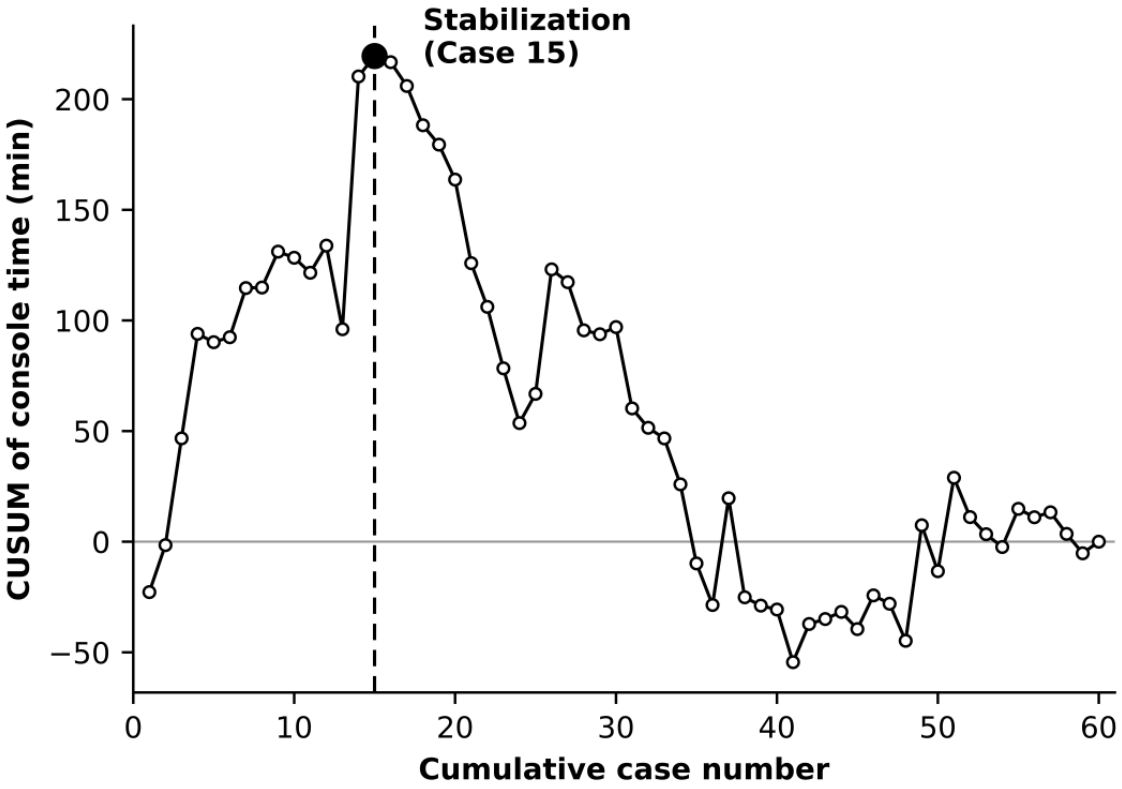

Fig. S4 Cumulative sum (CUSUM) plot identifying the learning curve inflection point at Case 15, demonstrating surgical stabilization in the SPRA approach.

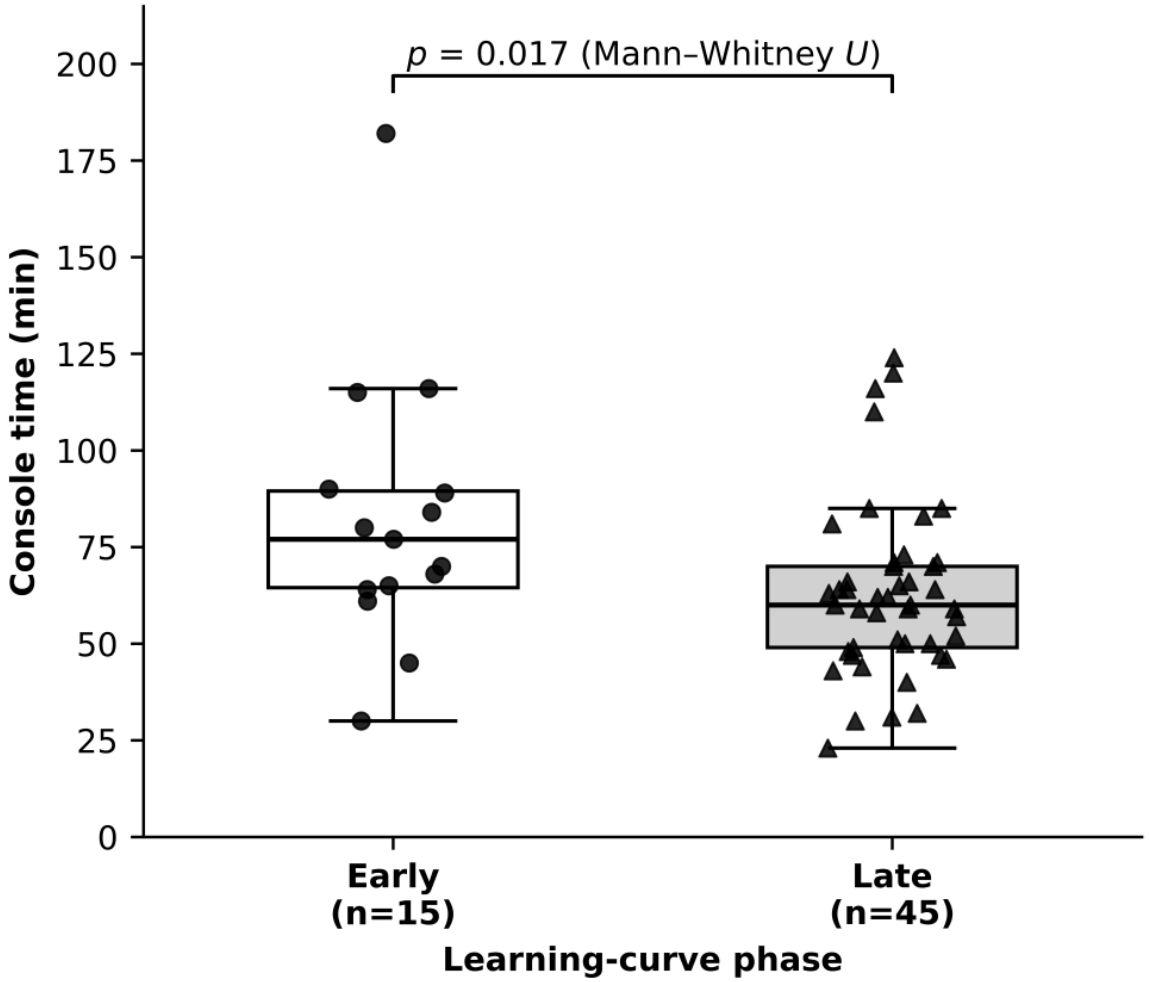

Fig. S5 Console time by learning-curve phase in SPRA thyroidectomy (early, cases 1–15, n = 15; late, cases 16–60, n = 45; 60 cases by the high-volume operator). Console time was significantly shorter in the late phase (Mann–Whitney U test, $p = 0.017$)