



Fukushima Medical University
Department of Chest Surgery

P3.366: Robot-Assisted Subxiphoid Thymectomy for Thymic Epithelial Tumors

A Single-Institution Experience of 41 Cases

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A single-institution 41-case experience suggests RST is feasible and safe for thymic epithelial tumors.

Take-home: RST is a feasible and safe minimally invasive option for thymic epithelial tumors in a single-institution 41-case experience.

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INTRODUCTION

- Robotic-assisted surgery is increasingly used for thymic epithelial tumors, but the optimal anterior mediastinal approach remains debated.
- Our institution introduced Robotic Subxiphoid-optical Thymectomy (RST) in 2022 and established it as a standard approach.
- This study summarizes perioperative outcomes of 41 consecutive RST cases for thymic epithelial tumors.

Analysis Set

Step	Criterion
Source sheet	2026_WCLC
Procedure	Subxiphoid approach
Diagnosis	Thymoma or thymic carcinoma
Study period / cohort	Jan 2022-Jan 2026; 41 patients

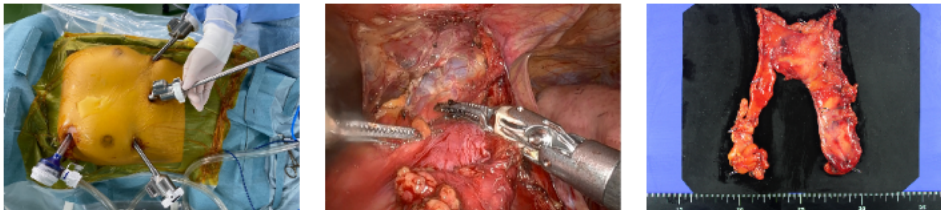
All analyses were performed from the institutional 2026_WCLC dataset.

METHODS

Study Design

- Single-institution retrospective review of RST cases.
- Analysis set: thymoma or thymic carcinoma treated via a subxiphoid approach (n=41).
- Evaluated variables: demographics, tumor size, operative time, console time, blood loss, drain removal, discharge timing, and complications.

Subxiphoid RST setup and operative view



Study Objective

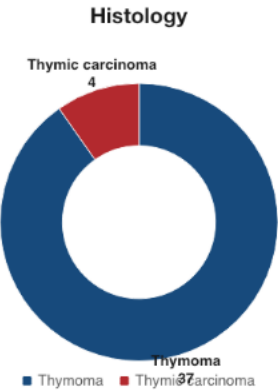
Summarize perioperative outcomes of 41 consecutive RST cases for thymic epithelial tumors.

Cohort: January 2022-January 2026; thymoma or thymic carcinoma treated by subxiphoid approach.

PATIENTS AND OUTCOMES

Characteristic	Value	Range / detail
Patients	41	RST for TET
Sex	18 M / 23 F	43.9% / 56.1%
Age, years	60.2	35-85
Tumor size, cm	4.0	1.2-9.0
Myasthenia gravis	7	17.1%
Pathology	37 thymoma / 4 carcinoma	90.2% / 9.8%

Continuous variables are shown as mean with observed range unless otherwise indicated.



Histology	n	%
Thymoma	37	90.2
Thymic carcinoma	4	9.8
Total	41	100

Thymoma subtypes: AB 20, B1 7, B2 6, A 3, B1/B2 1.

Cohort Snapshot

41 patients | mean age 60.2 years | 37 thymoma / 4 thymic carcinoma

Continuous variables are shown as mean with observed range unless otherwise indicated.

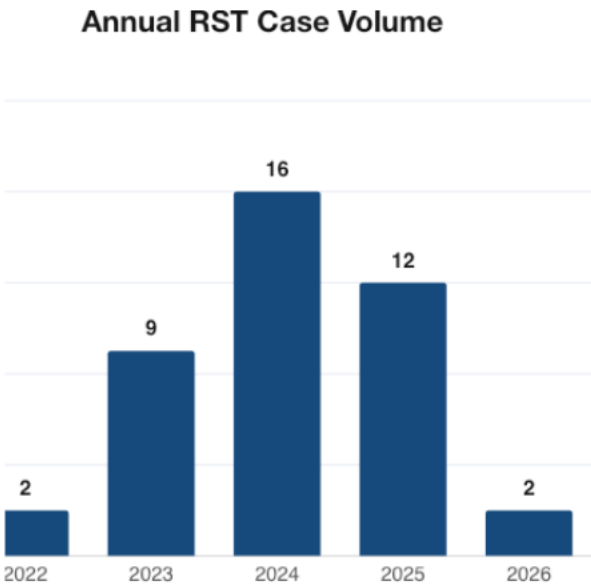
Histology

Thymoma accounted for 90.2% of cases; thymic carcinoma accounted for 9.8%.



Outcome	Mean / n	Range / detail
Operative time	158.7 min	63-281
Console time	106.6 min	35-243
Estimated blood loss	8.1 mL	1-70
Drain removal	POD 1.5	1-3
Postoperative stay	POD 4.8	2-13
Severe complications	0	No open conversion

Units: minutes for operative/console time; mL for blood loss; POD for drain removal/discharge.



Clinical Interpretation

Tumors up to 9.0 cm were managed through the subxiphoid approach. All drains were removed by postoperative day 3. Minor events were limited to pneumonia (n=1) and gout attack (n=1); no severe perioperative complication was recorded. The subxiphoid route may support bilateral mediastinal visualization while avoiding intercostal access.

DISCUSSION AND CONCLUSION**Key Message**

RST provided a safe, minimally invasive approach for thymic epithelial tumors, with low blood loss, no open conversion, and no severe perioperative complications in this 41-case experience.

Future Direction

- Continue accumulating cases to refine patient selection and procedural standardization.
- Evaluate long-term oncologic outcomes and recurrence-free survival.
- Compare RST with lateral thoracic approaches in matched cohorts.

REFERENCES & ACKNOWLEDGEMENTS

References

1. Suda T, et al. Robotic subxiphoid thymectomy: technique and perioperative outcomes.
2. Institutional robotic mediastinal tumor database, Fukushima Medical University.

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Artificial Intelligence (AI) Use Disclosure

ChatGPT (OpenAI) was used to assist with English language editing, poster layout, and draft table/chart preparation. All scientific content, data interpretation, and final responsibility were reviewed and approved by the authors.

Required Disclosure

Author disclosures were handled through the IASLC/WCLC presenter disclosure process. No commercial logos, promotional content, trade names, or product-group messages are included.

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Take-home: RST is a feasible and safe minimally invasive option for thymic epithelial tumors in this single-institution 41-case experience.