

Robotic-Assisted Thoracic Surgery Using the CMR Versius System: Initial Experience From the Middle East

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Introduction

- RATS has gained worldwide acceptance for thoracic malignancies, with the Da Vinci system dominating the literature.
- No reports exist on the use of the CMR Versius robotic platform for thoracic procedures.
- No RATS program has been described in the Middle East region.

We report the feasibility, safety, and early outcomes of the first RATS program in Jordan, which utilized the CMR Versius system.

Methods

- Retrospective analysis of 30 consecutive patients (Oct 2022 – Oct 2024) at a single institution in Jordan.
- Assessed perioperative outcomes, complications, and oncologic follow-up.
- Learning curve: 3 phases (10 cases each).
- Statistical analysis: Kruskal-Wallis, Fisher's exact, CUSUM, Kaplan-Meier.

Patient & Procedure Overview

**30**
Patients

**63.3%**
Male

**61.9 ±**
Mean age (years)

**86.7%**
Comorbidities

**76.7%**
Lung cancer

**16.7%**
Thymoma

**6.7%**
Other

**Lobectomy: 76.7% | R0 resection: 100%**
Conversion rate: 16.7% | 30-day mortality: 0%

Figure 1. Case Accumulation Timeline

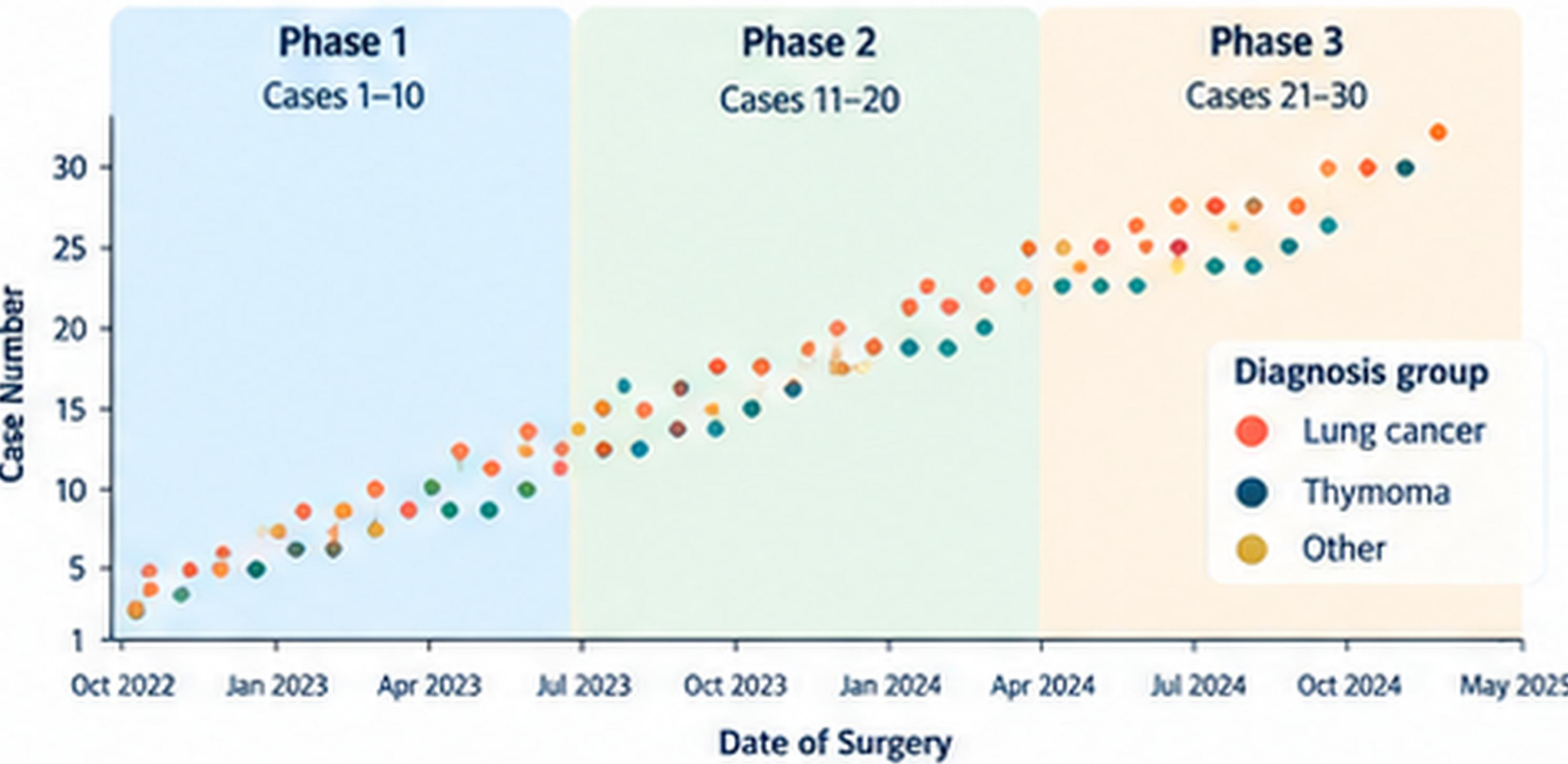


Figure 2. Swimmer Plot: Individual Patient Outcomes

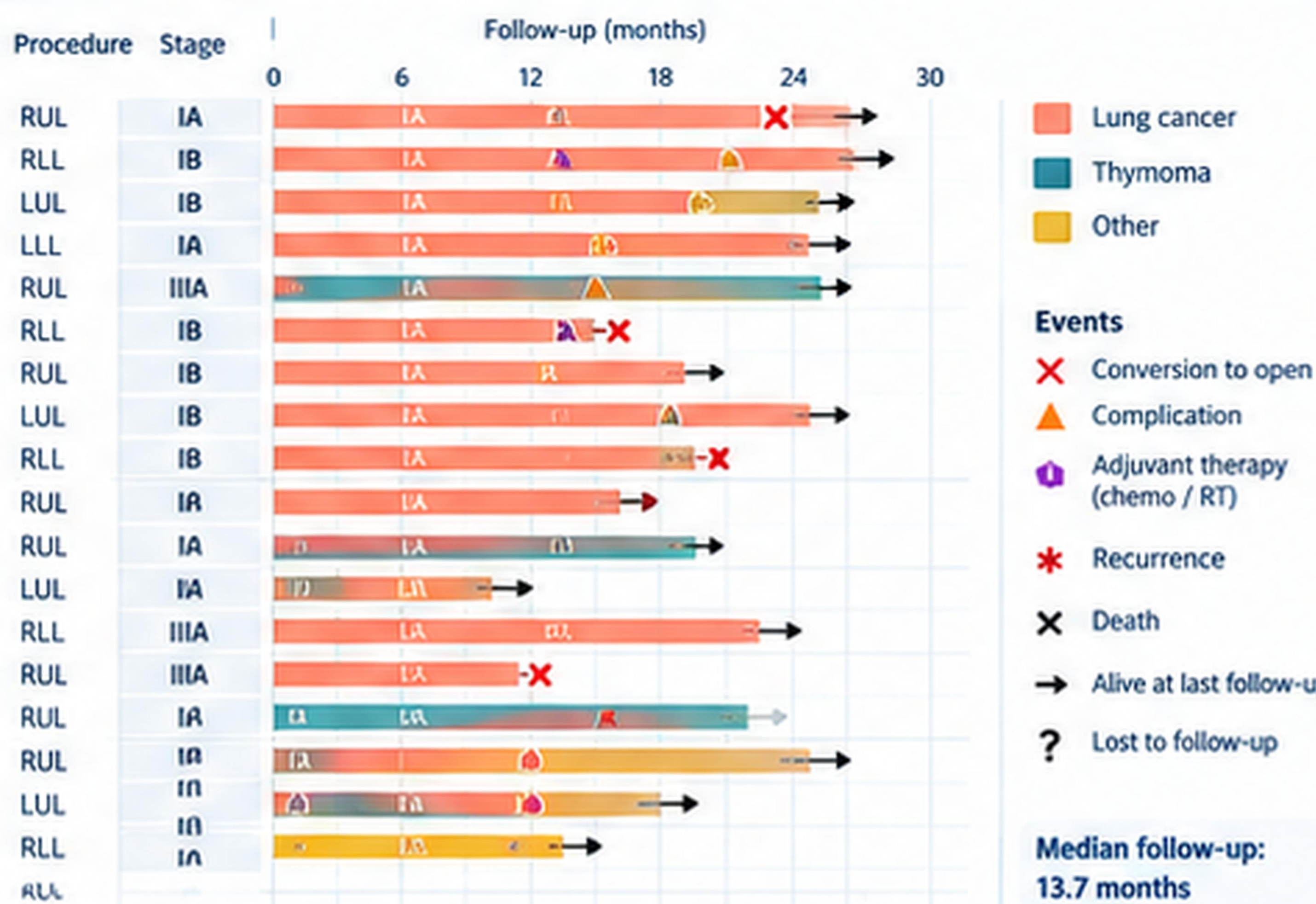


Figure 3. Overall Survival and Follow-up Distribution

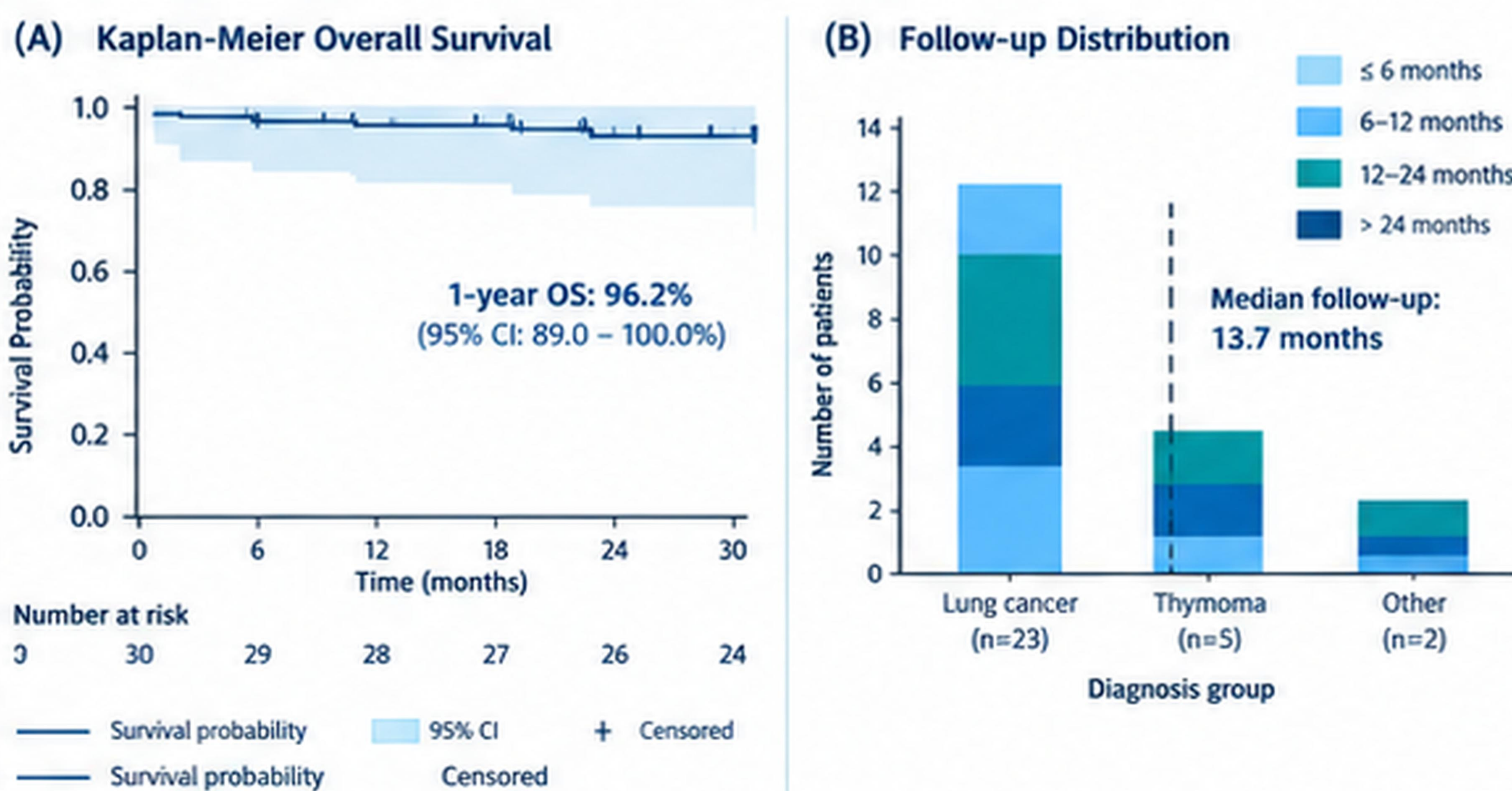
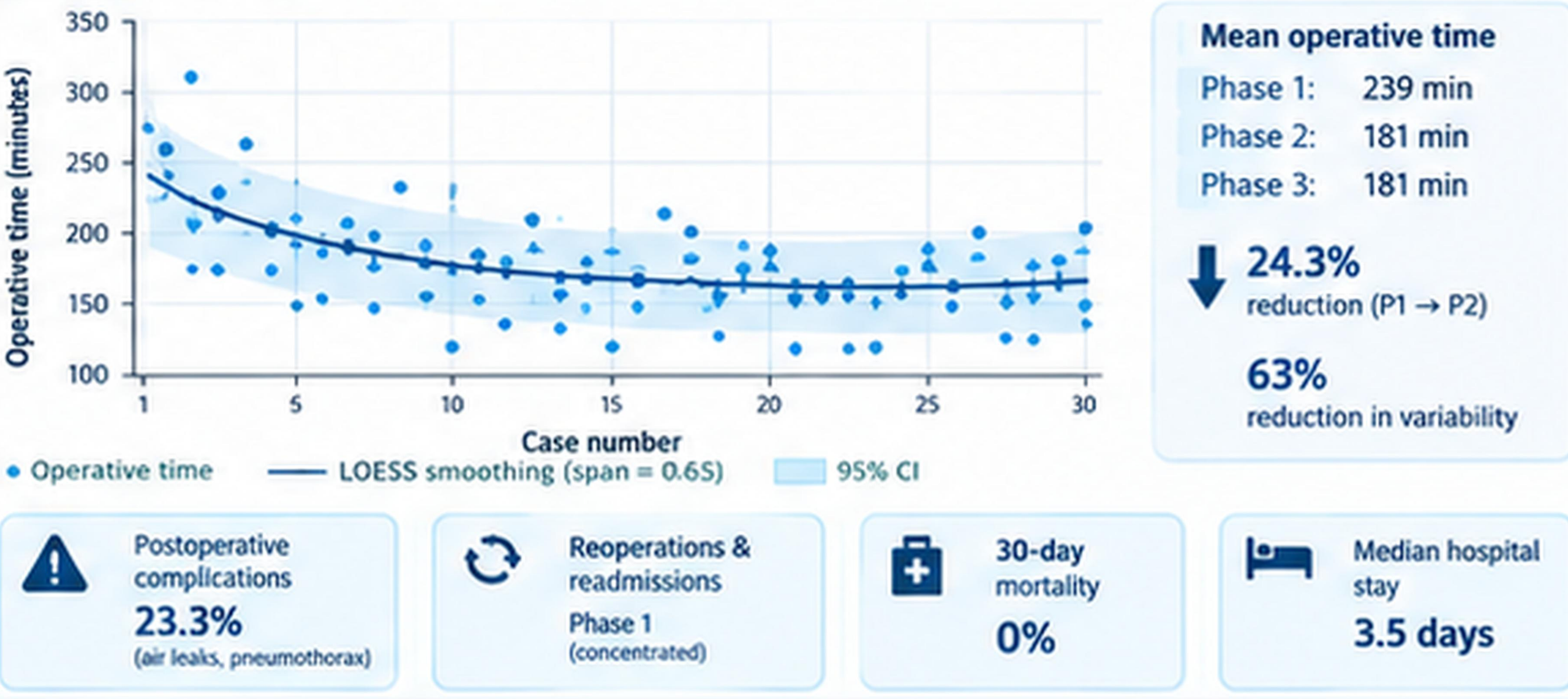


Figure 4. Learning Curve: Operative Time



Conclusions

- Establishing a RATS program using the CMR Versius system in the Middle East is feasible and safe.
- Acceptable perioperative outcomes and a demonstrable learning curve.
- Operative efficiency improved substantially after the initial 10 patients.
- Supports the applicability of robotic surgery for thoracic malignancy and encourages further adoption.
- Larger cohorts and longer follow-up are warranted to confirm oncologic adequacy.



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