

# Outpatient video-assisted thoracoscopic thymectomy in an octogenarian

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**Abstract:** Video-assisted thoracoscopic thymectomy has gained acceptance for the treatment of small thymomas. Appropriately selected elderly patients may benefit as much as younger patients from this procedure. Specific benefits of minimally invasive surgery include shorter hospital stays, decreased complications and improved oncologic outcomes. Outpatient thoracic surgery is an established model for some procedures. In this report, we present an 80-year-old patient with an enlarging 2.5 cm thymoma who successfully underwent an outpatient right video-assisted thoracoscopic thymectomy at our institution. The patient's postoperative course was uncomplicated. He continues to do well 3 years after his surgery. To our knowledge, this is the first reported outpatient video-assisted thoracoscopic thymectomy in an octogenarian.

**Keywords:** Video-assisted thoracoscopic surgery (VATS); thymectomy; elderly; octogenarian; ambulatory surgery

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## Introduction

Video-assisted thoracoscopic surgery (VATS) became an option for the treatment of thymomas in the 1990s. Compared to transsternal thymectomy, VATS thymectomy offers shorter hospital stays, reduced postoperative complications and at least equivalent oncologic outcomes (1,2).

The benefits of VATS thymectomy have not been specifically studied in elderly patients. One series of 25 septuagenarians and five octogenarians who underwent VATS lobectomies and pneumonectomies showed that over 90% of patients were fit for discharge the next day, with one patient being discharged on the same day (3). We have growing experience with outpatient mediastinal surgery and continue to offer outpatient stays to those who meet criteria.

In this case report, we describe an outpatient VATS thymectomy in an 80-year-old male with an enlarging thymoma. To our knowledge, this is the first report of an outpatient VATS thymectomy in an octogenarian.

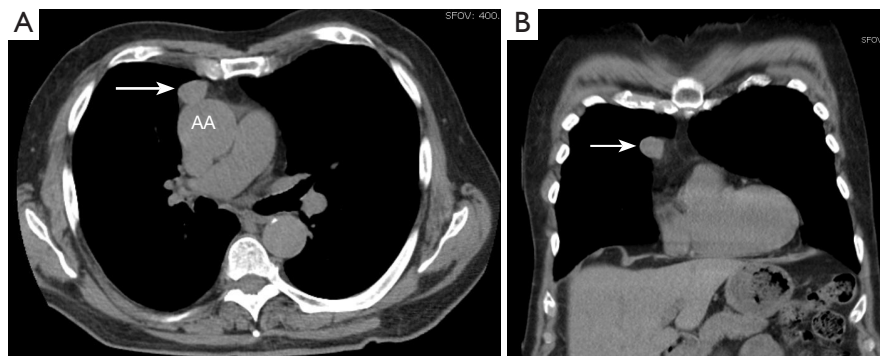
## Case presentation

The patient is an 80-year-old male who originally presented

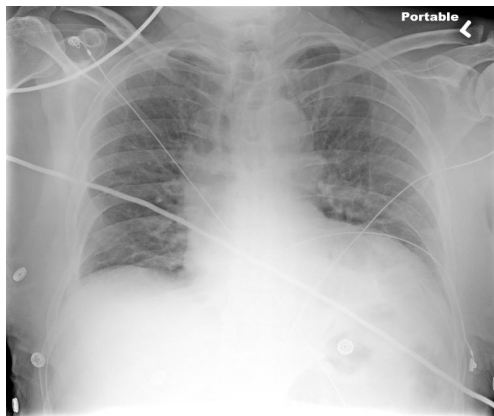
to the emergency department with right sided pleuritic chest pain. Chest CT showed a 2.3 cm anterior mediastinal mass. The mass was enlarged to 2.5 cm on a 6-month follow up CT scan (*Figure 1*) and he was referred to thoracic surgery. The patient requested the shortest possible hospital stay. Given the size and location of the mass as well as the patient's overall health status, we felt that a same day VATS procedure would be possible.

A right sided VATS approach was used with CO<sub>2</sub> insufflation, a single lumen endotracheal tube and three 5 mm ports. The lesion and entire thymus including superior horns were resected and extracted through an enlarged port site. Intercostal blocks were placed. At the completion of the procedure, the lungs were re-expanded under standard protocol and no chest tube was placed. The patient underwent a postoperative chest X-ray (*Figure 2*) in the post-anesthesia care unit and was discharged home in stable condition five hours after surgery. He returned to clinic two weeks later for standard follow-up and was doing well.

Pathology revealed a World Health Organization (WHO) B1 lymphocyte rich thymoma. The patient is well without recurrence three years following his surgery.



**Figure 1** Preoperative computed tomography scans showing a growing 2.5 cm anterior mediastinal mass (arrow) anterior to the ascending aorta (AA) in an 80-year-old male.



**Figure 2** Normal postoperative chest X-ray in an 80-year-old male who underwent an outpatient video-assisted thoracoscopic surgery (VATS) thymectomy.

## Discussion

Thymectomy is the standard of care for early stage thymomas. In general, VATS thymectomy is reserved for non-invasive tumors under 5 cm; however there is no formal consensus. Our patient's thymoma was consistent with these characteristics.

To date, 5-year and 10-year oncologic outcomes of VATS thymectomy have been favorable. In a cohort of 82 patients aged 20–90, 5-year overall survival was higher in the VATS thymectomy group than the transsternal thymectomy group, while 5-year recurrence free survival was comparable (2). An additional study found ten-year survival to be 100% after either VATS or transsternal thymectomy (4).

The feasibility of an outpatient VATS thymectomy should be based on the patient's baseline health status and social factors, not on the patient's age. Our previous

experience with outpatient transcervical thymectomy led us to frequently perform outpatient VATS thymectomy for nonthymomatous myasthenia gravis. We have now expanded the scope of this procedure to outpatient VATS thymectomy for small thymomas even in octogenarians.

This case is the first report of an outpatient VATS thymectomy in an octogenarian. Elderly patients with small non-invasive thymomas may benefit as much as younger patients from a VATS procedure in terms of physiologic and oncologic outcomes. Nevertheless, outpatient VATS thymectomy remains an area of limited experience and more studies are needed in elderly patients.

## Acknowledgements

None.

## Footnote

*Conflicts of Interest:* The authors have no conflicts of interest to declare.

*Informed Consent:* Written informed consent was obtained from the patient for publication of this manuscript and any accompanying images.

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