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10th International Workshop on Surgical Exploration of the
Mediastinum and Systematic Nodal Dissection



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VIDEO-ASSISTED MEDIASTINOSCOPIC LYMPHADENECTOMY (VAMLA)

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More than 25 years after its development and initial publication in 2002, VAMLA is still often misunderstood as merely an extension of classical mediastinoscopy and solely a staging tool.

However, VAMLA was the first minimally invasive and uniportal surgical approach to mediastinal pathologies, with systematic nodal dissection being just one of its applications.

Over the past quarter-century since VAMLA's invention, oncological principles and technical capabilities have advanced dramatically. Consequently, VAMLA's indications and techniques have evolved and developed in response to these changes.

VAMLA has been adopted by centers worldwide, spanning all continents, yet the percentage of thoracic surgeons familiar with this approach remains surprisingly low.

Discussions about VAMLA indications often shift into debates about oncological principles and concepts, which are constantly evolving. In this context, we should focus on the potentials of VAMLA and avoid getting lost in the extensive landscape of oncological studies and speculations.

Indications and advantages of VAMLA

- **Staging of thoracic malignancies** (Lung cancer, thymus, anything else). VAMLA is the most accurate pre-therapeutic nodal staging tool and available everywhere at very low cost.
- **Precise pre-therapeutic evaluation of nodal spread** supports prognosis-dependent indications for various multimodal treatment algorithms, especially in the age of immunotherapy.
- **Size matters:** In today's individualized therapies requiring extensive tissue examinations, VAMLA specimens are much more usable than those obtained via EBUS.

- **Systematic nodal dissection for thoracic malignancies:** As long as nodal dissection remains part of the treatment algorithm, VAMLA offers perfect staging and therapy in one step.
- **Improved radicality:** VAMLA can significantly enhance the often mediocre radicality of nodal dissection during minimally invasive lobectomy. When combined with robotic or uniportal tumor resection, nodal dissection becomes much easier and more radical with the added cost of only one port. Stations 4R and 7 are relatively easy to dissect with VAMLA; even stations 10 and 11 are partially accessible, and stations 5/6 can be reached with an extended mediastinoscopy if indicated.
- **Bilateral lymphadenectomy:** VAMLA provides bilateral lymphadenectomy, which potentially improves survival, especially in left-sided tumors, if not generally.
- **Time-saving:** Saving 30-60 minutes of a surgeon's time is advantageous, particularly in an era of surgical staff shortages in many countries. VAMLA is a single-surgeon procedure, whereas thoracoscopic lymphadenectomy typically requires at least two surgeons.
- **Shorter one-lung ventilation:** Shorter one-lung ventilation is beneficial for patients with pulmonary fibrosis or otherwise compromised lungs. Unlike VATS, which requires single-lung ventilation during lymphadenectomy, VAMLA does not.

Technique

- Nowadays **Ligasure and suction probe** are used as dissection devices very similar to the no-touch-technique seen in VATS-lymphadenectomy. The combination of a grasper and monopolar suction cautery as initially described would be the low cost alternative. Modern energy devices allow for better protection of the recurrent laryngeal nerve, provide better hemostasis and thus a cleaner operation field.
- A **spreadable scope**, which allows for wider visualization of the surgical field, is advantageous but not mandatory.
- If VAMLA is chosen not for pre-therapeutical staging but as part of the surgical treatment, it **may be performed together with lung resection** on the same day, thus avoiding potential difficulties arising from post-VAMLA scar tissue formation.
- As with other special surgical procedures it might become a problem to buy necessary instruments. Due to the costs associated with EU certification, instrument manufacturers are very hesitant to produce specialized tools required for infrequently performed procedures. We should consider today how to deal with that tomorrow.

Due to time constraints, only key steps of VAMLA will be shown in this presentation.

A complete, unedited video of our technique in a typical complex case is available on my YouTube channel.

<https://youtu.be/DR2wx6FwEIA>