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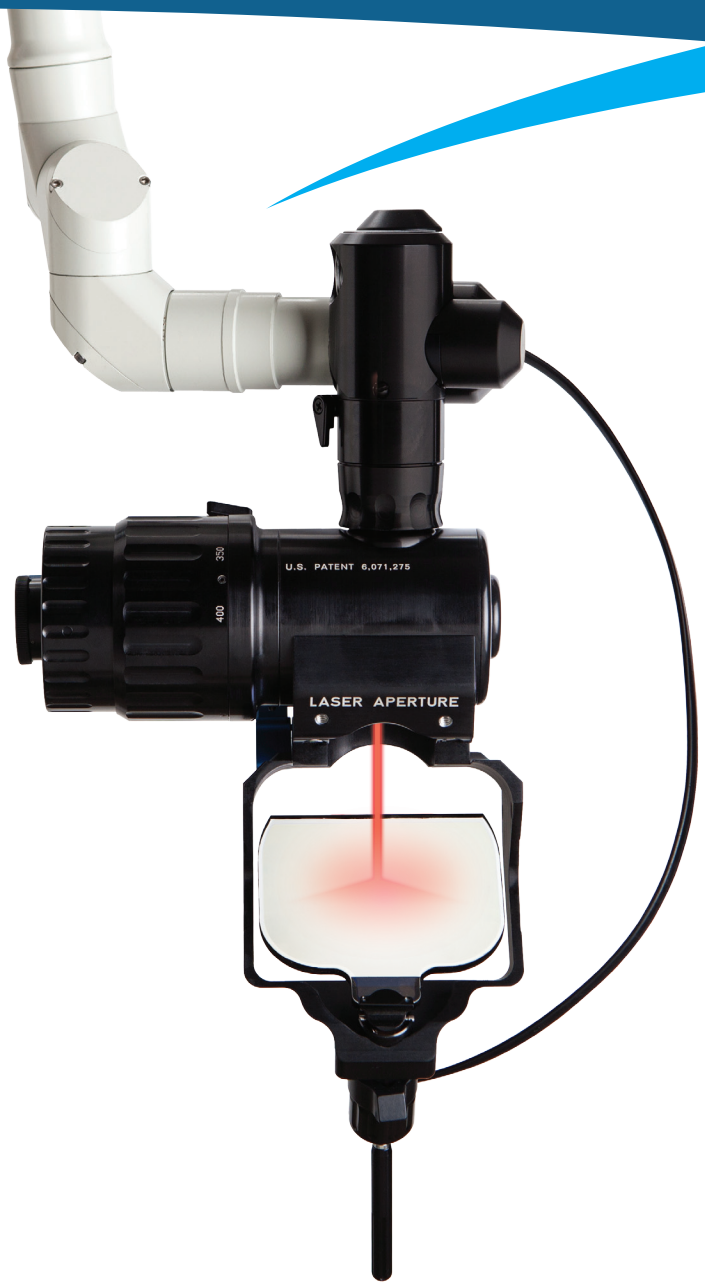
Lumenis Smart CO_2 Solutions for Transoral Laser Microsurgery (TLM)



Lumenis Advanced Laser Systems

First Line Therapy

CO_2 lasers are increasingly becoming a first line treatment of early stage airway cancers, especially in the larynx. Studies have shown considerable cost savings and equivalent or better treatment outcomes for transoral laser resection of laryngeal tumors in comparison to radiation.[1] CO_2 laser surgery does not eliminate the option for reoperation or radiation, should salvage therapy become necessary.

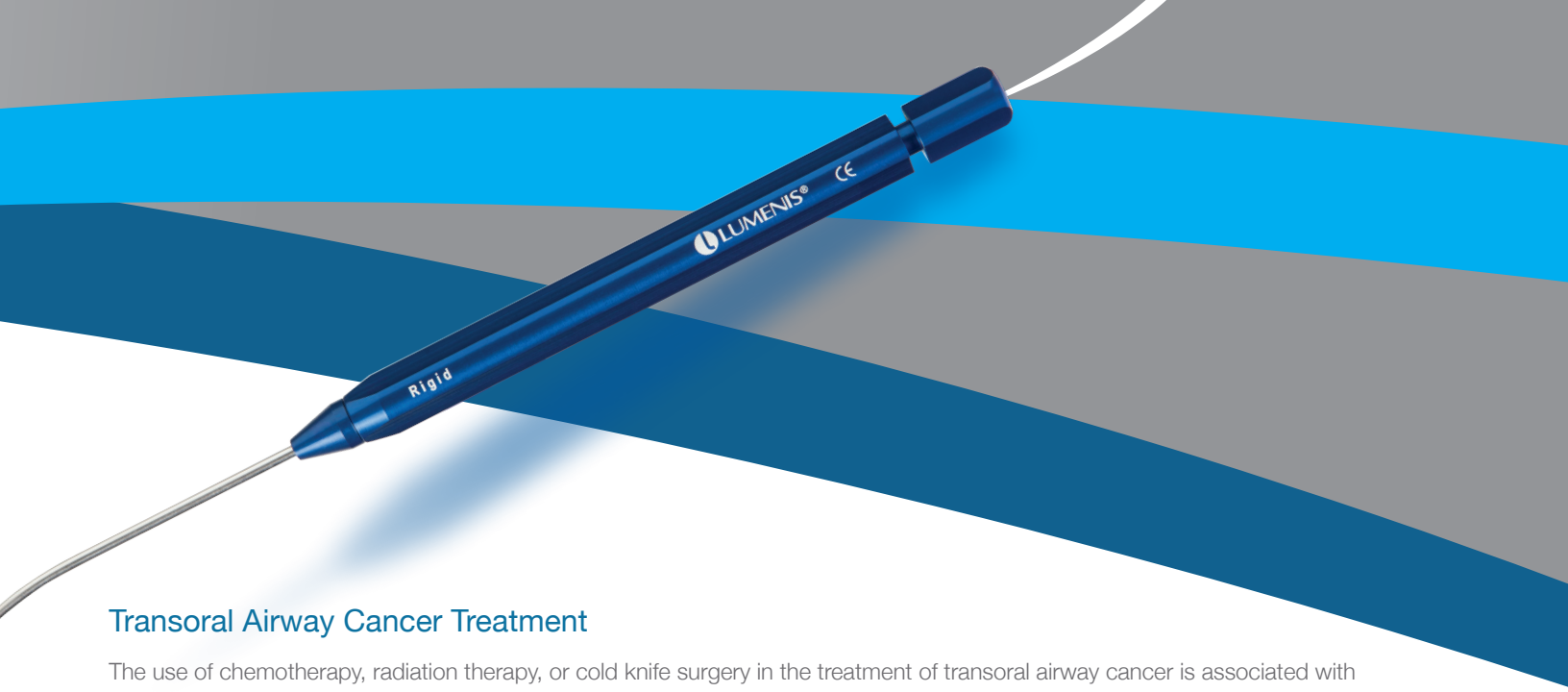
Lumenis advanced laser systems enable highly controlled, smart tissue management for treating delicate tissue surfaces. This allows for excellent margins, with optimal tissue sparing. The Digital AcuBlade Scanning Micromanipulator is well suited for microscopic surgery. Scanner automation and predictability provide ease of use, reproducible tissue effect and an excellent tool for teaching surgical technique. When line-of-sight laser application is not practical or desired, the Lumenis FiberLase CO_2 fiber is ideal for use in cramped angled spaces and through flexible endoscopes.

The Digital AcuBlade for:

- Precise laser beam delivery conforms to tissue topographies and preserves non-target tissue
- Predictable incision depth and ablation area ensure reproducible results
- Virtual char-free tissue margins and superior visibility
- Microvascular hemostasis keeps visual field clear

The FiberLase Flexible CO_2 Fiber for:

- Dependable handheld CO_2 laser performance
- Easier access to hard to reach anatomy
- Efficient power transmission for rapid bulk tissue ablation
- Robotic surgery applications



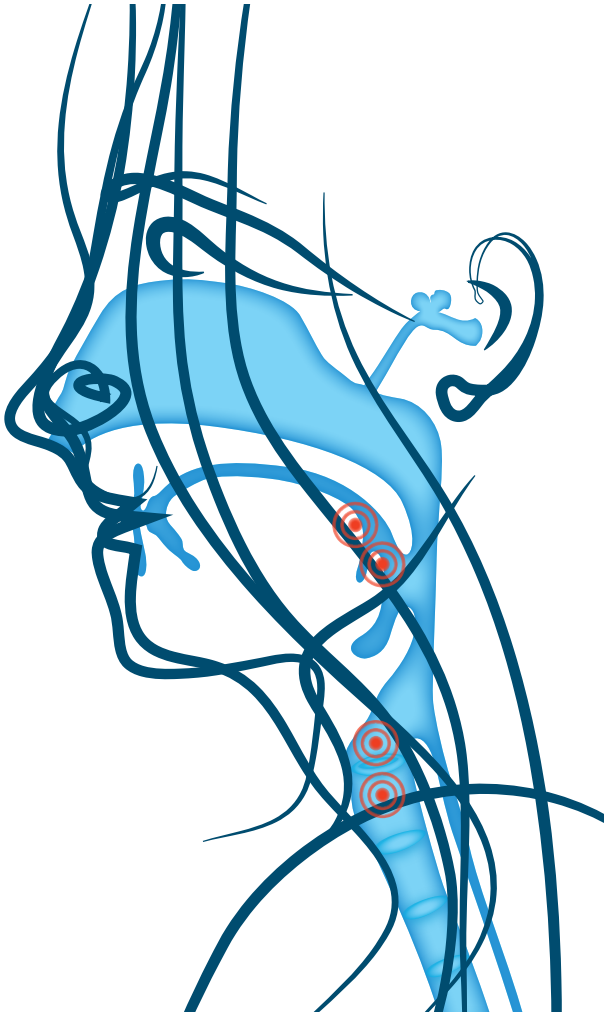
Transoral Airway Cancer Treatment

The use of chemotherapy, radiation therapy, or cold knife surgery in the treatment of transoral airway cancer is associated with complications that can dramatically alter facial appearance and impact the ability to swallow, talk, eat, smell, taste, hear, and breathe normally.

Alternatively, Transoral Laser Microsurgery (TLM) offers low morbidity and excellent cure rates compared to chemoradiation.[2] Immediate treatment post-surgical biopsy eliminates return visits to the Operating Room and may serve as salvage therapy for select patients with previously treated laryngeal or pharyngeal squamous cell cancer or other pathologies.

Unlike open surgery, CO_2 lasers can remove cancer with fewer disturbances to structures, nerves, and tissue. Lasers can be used for a wide range of cancer procedures, recurrent papillomatosis, and clinical conditions that may cause swallowing disorders.[3] TLM patients are able to swallow sooner post microsurgery, and hospital stays are typically five to seven days less than for open surgery.[4]

TLM surgical technique utilizes repeated tumor division and piecemeal removal, making it possible to microscopically map tumor depth and assess margins in multiple planes.



Lumenis & TLM Advantages:

- Precise incision, excision, and vaporization, with microvascular hemostasis
- Predictable, reproducible laser-tissue interaction
- Minimal thermal damage for excellent tissue margins
- Tumor-host interface mapping for smart margin management and minimal healthy tissue loss
- Minimal disturbance to structures, nerves, and tissue
- Multi-option salvage treatments in the event of recurrence
- Suture-free procedure enables swallowing sooner post-surgery
- Shorter hospital stays help reduce procedure costs

Treatment & Excisions:

- Benign and malignant lesions of the oral cavity, pharynx, or larynx
- Leukoplakia
- Vocal cord lesions, benign and recurrent
- Laryngeal papillomas

Surgeon Experience

"In treating laryngeal cancer I tailor the procedure to the patient and to the disease. Early staged disease that involves the vocal folds, I feel is best treated with the use of a CO_2 laser using a laryngoscope, microscope and Digital AcuBlade. I feel this offers excellent outcome and still allows for more aggressive treatment later if required."

— Mark Courey, M.D.,
Professor, University of California, San Francisco Otolaryngology – Head and Neck Surgery Director, Division of Laryngology

"TLM is superior to radiotherapy which is often an over-treatment. Oncological results are often better with laser surgery than with radiation. There's less local recurrence, and less salvage laryngectomies. Morbidity and complication rates are lower with similar results."

— Wolfgang Steiner, M.D.,
Professor Emeritus, Department of Otolaryngology, University of Gottingen Medical Center, Germany

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3. Rich JT, Liu J, Haughey BH, Swallowing function after transoral laser microsurgery (TLM) ± adjuvant therapy for advanced-stage oropharyngeal cancer Laryngoscope, 2011, Nov; 121(11):2381-90.
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