

CO₂ Laser Partial Laryngectomy

Procedure-Specific Information & Consent

This document explains transoral CO₂ laser surgery of the voice box and supports your discussion with your surgeon.

Patient Name: _____ PHN: _____ Date of Birth: _____

1. Recommended Procedure

Transoral CO₂ laser partial laryngectomy with direct laryngoscopy and biopsy, with repeat or staged laser excision if required. The amount of tissue removed and closely related steps may change based on exposure, the location and depth of the lesion, and findings during surgery.

2. Why This Procedure Is Recommended

This procedure may be recommended to diagnose or remove:

- Early-stage cancer of the voice box
- Carcinoma in situ or severe dysplasia (high-risk abnormal cells)
- A persistent or recurrent lesion suitable for treatment through the mouth
- A selected non-cancerous lesion that requires removal.

The goal is to remove the lesion while preserving the voice box and as much useful voice, swallowing, and breathing function as possible. Complete removal, cure, and a specific voice outcome cannot be guaranteed.

3. What the Procedure Involves

- Performed under general anesthesia. You are fully asleep while an anesthesia specialist monitors you
- A rigid metal laryngoscope is passed through the mouth to expose the voice box
- The lesion is viewed under magnification and removed in one or more pieces using a CO₂ laser
- No external neck incision is usually required
- Tissue is sent for final pathology
- The length of surgery and hospital stay depend on the extent of removal and your recovery
- A temporary feeding tube or tracheostomy may be required.

If safe exposure is not possible or the lesion is more extensive than expected, the surgeon may take biopsies, change the extent of laser removal, stage the procedure, or stop and discuss another treatment.

4. Expected Benefits and Limitations

Potential benefits:

- Diagnosis and removal of the laryngeal lesion
- Treatment of selected early cancers without an external neck incision
- Preservation of the voice box and useful voice and swallowing function when possible
- A shorter recovery than open partial laryngectomy for suitable patients.

Important:

Voice quality will change and may remain rough, weak, breathy, or reduced in pitch or projection. The amount of voice change often depends on how much tissue must be removed. Pathology may show cancer at or near an edge, deeper disease, or a different diagnosis. Repeat laser surgery, radiation, open surgery, total laryngectomy, or another treatment may then be recommended.

5. Risks and Side Effects

Common or Expected

- Sore throat and pain with swallowing
- Temporary worsening of voice; some permanent voice change is expected
- Blood-streaked saliva or minor bleeding

- Temporary cough, throat clearing, or change in swallowing
- Lip, gum, tongue, jaw, or dental discomfort from the laryngoscope.

Less Common but Important

- Chipped or loosened teeth, injury to dental work, or injury to the lips and gums
- Tongue numbness, weakness, taste change, or jaw discomfort, which can rarely persist
- Significant bleeding requiring urgent assessment, another operation, or airway treatment
- Airway swelling, trouble breathing, or need for a temporary tracheostomy
- Food or liquid entering the airway (aspiration), swallowing trouble, dehydration, or pneumonia
- Need for a temporary feeding tube
- Scar tissue, granulation tissue, web formation, or narrowing of the airway
- Poor healing, exposed cartilage, or infection or breakdown of laryngeal cartilage (rare)
- Laser burn or airway fire (very rare)
- Residual or recurrent disease and need for further cancer treatment
- Anesthesia-related complications, discussed separately.

6. CO₂ Laser Specific Considerations

- The true depth or extent of disease may be greater than expected from examination or imaging
- Removing the lesion in sections and laser heat effects can make margin interpretation difficult
- A second-look examination, repeat laser surgery, radiation, or other treatment may be recommended
- Stopping smoking and nicotine use improves healing and lowers the risk of recurrence and another cancer
- Long-term examination of the voice box is essential
- Voice or swallowing therapy may be recommended.

7. Alternatives

Depending on the diagnosis and extent, alternatives may include:

- Radiation therapy for an appropriate cancer
- Open partial laryngectomy
- Total laryngectomy for selected extensive or recurrent disease
- Repeat biopsy or observation for selected non-invasive lesions
- No treatment, with the risks of growth, spread, airway or swallowing problems, and loss of treatment options.

8. Recovery Expectations

- Diet may be limited to liquids or soft foods until swallowing is safe
- Voice rest or limited voice use may be recommended, followed by gradual voice use
- Avoid smoking, nicotine, alcohol-related irritation, heavy lifting, and strenuous activity until cleared
- Ask when and how pathology results will be reviewed, and attend all follow-up visits.

Seek urgent medical care for:

- Call 911 for trouble breathing, noisy breathing, rapidly worsening throat swelling, or heavy bleeding
- Seek same-day care for persistent bleeding, inability to swallow liquids or saliva, worsening choking, dehydration, increasing pain, fever, or chest symptoms.

9. Acknowledgement

I understand the planned transoral CO₂ laser procedure, possible changes based on exposure and findings, expected benefits, limits, risks, alternatives, pathology follow-up, and recovery. My questions have been answered. This document supports, but does not replace, the hospital consent process.

Patient / Parent / Guardian Name: _____

Signature: _____

Date: _____