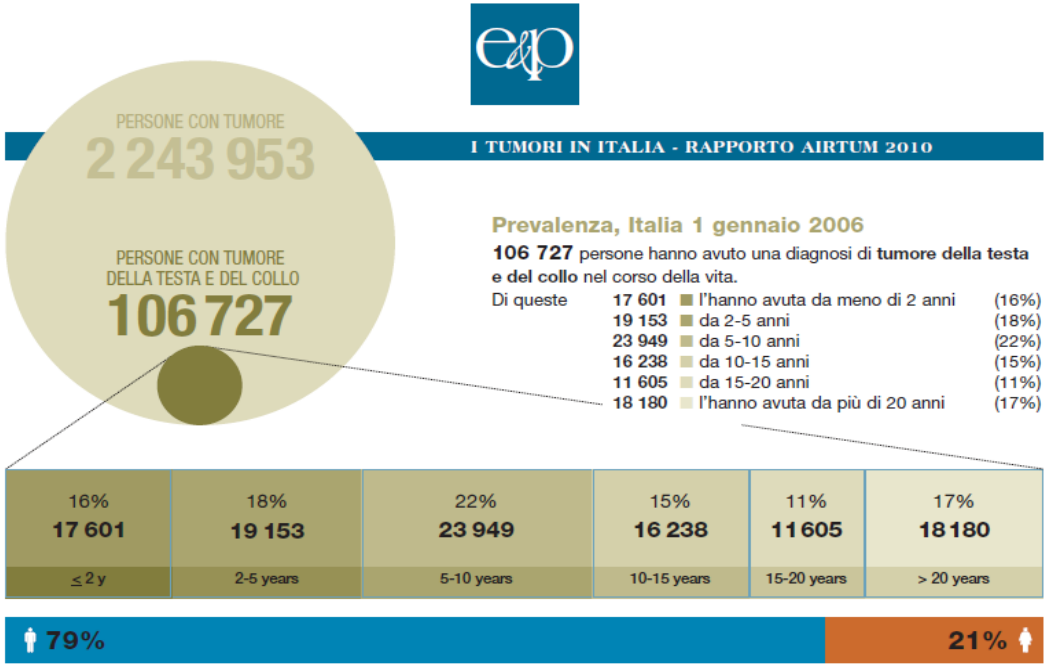
Chirurgia conservativa

Fausto Chiesa
Vice Direttore Scientifico

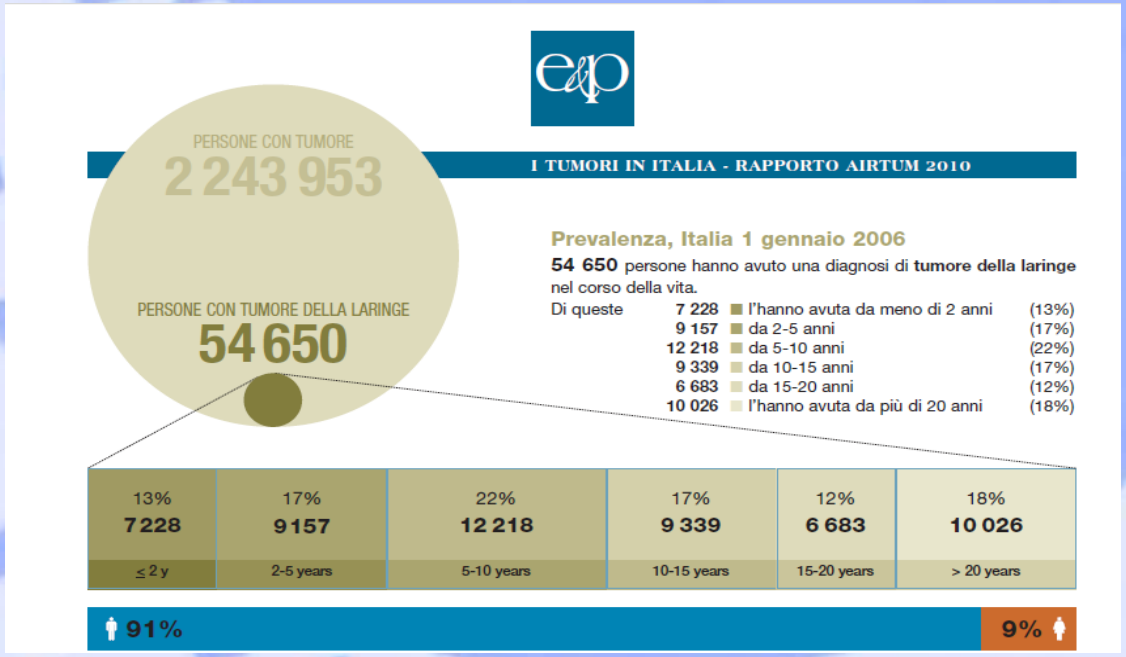
Mohssen Ansarin
Direttore Divisione Testa e Collo

Istituto Europeo di Oncologia



Laryngeal Cancer:
51% of H&N cancer

H&N Cancer 4.7%
of all cancer



http://www.registri-tumori.it/cms/?q=Rapp2010Indice

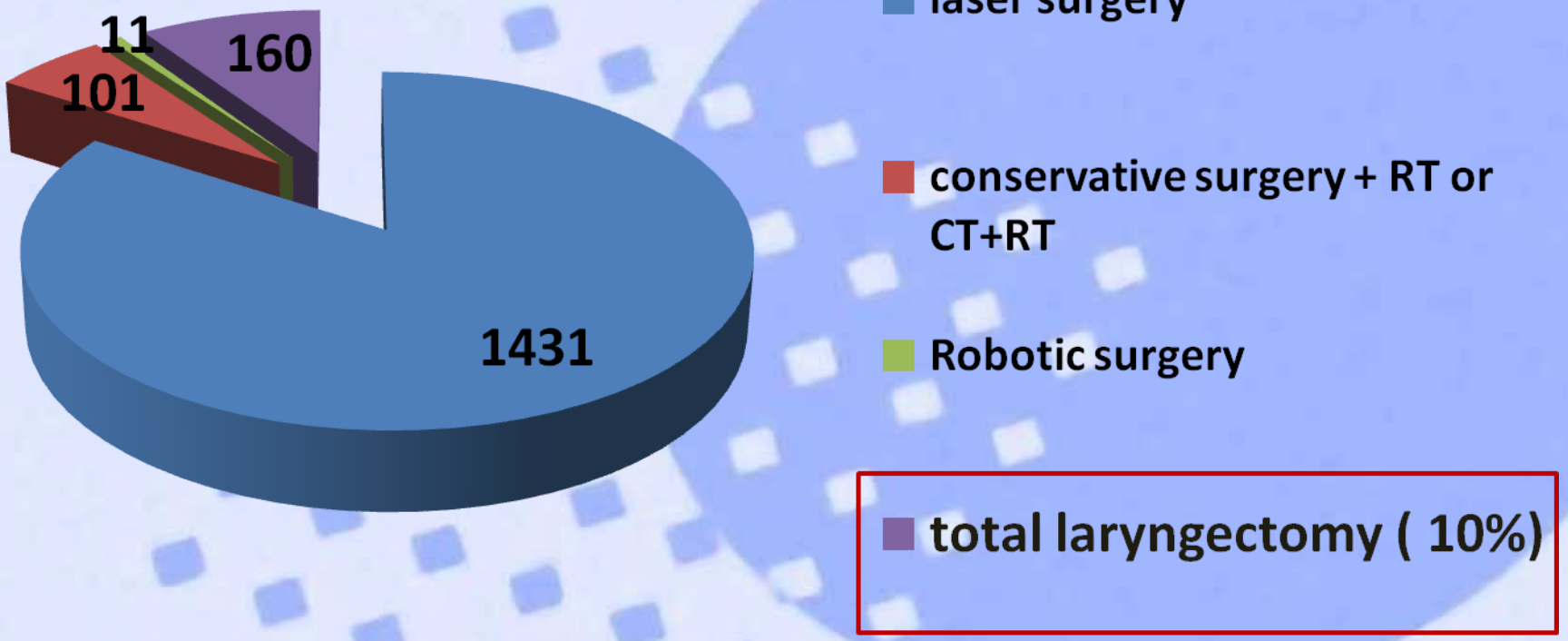
IEO Internal Clinical Practice Guidelines

cTNM	T1	T2	T3	T4
N0	Mini-invasive surgery	Mini-invasive surgery	Conservative surgery Vs Ct+RT	CT+RT+/-ND Vs Total laryngectomy
N1	Mini-invasive surgery + ND	Mini-invasive surgery + ND	Conservative surgery Vs Ct+RT	CT+RT+/-ND Vs Total laryngectomy
N2a-c	Mini-invasive surgery + ND	Mini-invasive surgery + ND	Conservative surgery Vs Ct+RT	CT+RT+/-ND Vs Total laryngectomy
N3	CT+RT+/-ND	CT+RT+/-ND	CT+RT+/-ND	CT+RT+/-ND

January 2001 - September 2011

1703 laryngeal surgery

Treatment modalities

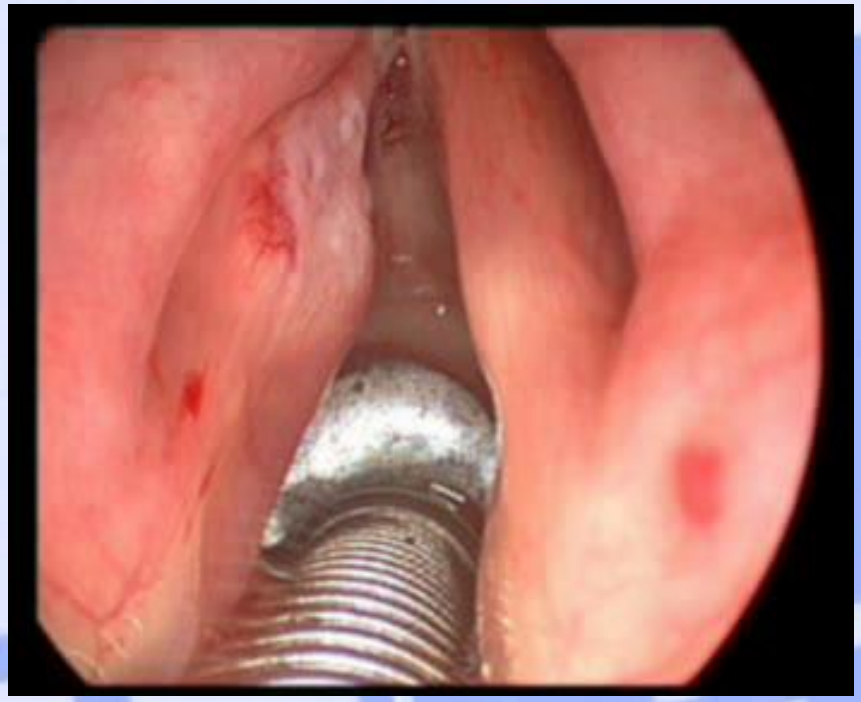


“Indications”

1. Suspicious superficial lesions (without previous biopsy)
2. Glottis cancer (cTis, T1, T2N0)
3. Early recurrence after RT(ycT1-2N0)
4. Supraglottic cancer(cT1-2,N0-2c)

5. Intermediate stage glottic cancer (pilot study)
6. Combined supracricoid laryngectomy

One step procedure in our experience avoid over treatment



22% cT1/pT0

ENDOSCOPIC CO_2 LASER SURGERY FOR EARLY GLOTTIC CANCER IN PATIENTS WHO ARE CANDIDATES FOR RADIOTHERAPY: RESULTS OF A PROSPECTIVE NONRANDOMIZED STUDY

Mohssen Ansarin, MD,[1] Michal Zabrodsky, MD,[1,2] Livia Bianchi, MD,[3] Giuseppe Renne, MD,[4] Antonella Tosoni, MD,[5] Luca Calabrese, MD,[1] Paola Tredici, MD,[1] Barbara A. Jereczek-Fossa, MD, PhD,[3] Roberto Orecchia, MD,[3,6] Fausto Chiesa, MD[1]

[1] Division of Head and Neck Surgery, European Institute of Oncology, Via Ripamonti, 435, 20141 Milano, Italy. E-mail: fausto.chiesa@ieo.it
[2] Department of Otorhinolaryngology and Head and Neck Surgery, First Medical Faculty, Charles University, Prague, Czech Republic
[3] Division of Radiotherapy, European Institute of Oncology, Milan, Italy
[4] Division of Pathology and Laboratory Medicine, European Institute of Oncology, Milan, Italy
[5] Division of Anaesthesiology and Intensive Care, European Institute of Oncology, Milan, Italy
[6] University of Milan, Milan, Italy

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Abstract: *Background.* Treatment of early glottic malignancies is controversial, particularly if postoperative endoscopy shows minimal/no residual disease.

Methods. In a prospective nonrandomized study, we performed endoscopic laser surgery with curative intent in 59 patients with early glottic carcinoma presenting for radiotherapy after diagnosis elsewhere by random biopsy or cordal stripping. We analyzed outcomes and residual cancer in the specimen.

Results. Clinical staging elsewhere did not correspond to (usually underestimated) the pathologic stage in 60.7%. In 22%, no tumor was identified on pathologic examination. After 35.3 months (mean), 93.2% were alive with no evidence of disease. Local control was achieved in 98.3% of the patients, and 13.5% of the patients required radiotherapy. The larynx was conserved in 98.3%.

Conclusions. Biopsy/stripping are best abandoned for persistent glottic lesions. A single laser endoscopic procedure provides reliable staging and definitive treatment in most cases using fewer resources. Biopsied patients presenting for treatment should be offered laser surgery as an alternative to radiotherapy. © 2005 Wiley Periodicals, Inc. *Head Neck* **28:** 121–125, 2006

Keywords: early cancer; larynx; CO_2 laser

Correspondence to: F. Chiesa

The clinical appearance of inflammatory glottic lesions is not a reliable indicator of benign versus precancerous versus early cancerous histology, and microlaryngoscopy with histologic examination is necessary for all persistent glottic lesions. Conventional diagnostic endoscopy in such cases requires multiple random punch biopsies or mucosal stripping, both under general anesthesia. If

Results

Table 2. Relation between clinical stage as determined by laryngoscopy performed elsewhere (CSE) and the European Institute of Oncology final pathologic classification (EIOpT) In 59 patients with early glottic cancer.

CSE	ypTis	ypT1a	ypT1b	ypT2	ypT0	total
cTis	2	5	2	0	1	10
cT1a	2	12	2	1	12	29
cT1b	2	3	12	3	0	20
Total	6	20	16	4	13	59

- The first point emerging from this study was that in 13 patients (22%) no tumour was identified (ypT0) on pathological examination.

-The second point was that the clinical stage (cTNM) evaluated elsewhere did not correspond to the pathological stage (pTMN) in 34 (60.7%) cases.

For an optimal cancer treatment you must have an optimal staging.
This is the principal of oncology

Laser Surgery for Early Glottic Cancer

Impact of Margin Status on Local Control and Organ Preservation

Mohssen Ansarin, MD; Luigi Santoro, MSc; Augusto Cattaneo, MD; Maria Angela Massaro, PhD; Luca Calabrese, MD; Gioacchino Giugliano, MD; Fausto Maffini, MD; Angelo Ostuni, MD; Fausto Chiesa, MD

Objective: To assess the impact of margin status on disease-free survival, overall survival, and organ preservation in early glottic cancer treated by endoscopic laser surgery.

Design: Prospective nonrandomized study.

Setting: Tertiary referral center.

Patients: A total of 274 patients with untreated (possibly biopsied) cTis, cT1a/b, cT2, cN0 glottic cancer; adequate exposure of the glottic region; no contraindications to general anesthesia; and the ability to give informed consent.

Interventions: European Laryngological Society laser cordectomy. Patients with negative margins (>1 mm) were followed, patients with close margins (≤1 mm) or 1 positive margin (tumor on margin) had another operation, and patients with more than 1 positive margin had postoperative radiotherapy. Median follow-up was 58 months.

Main Outcome Measures: Eight-year disease-free survival, 5-year overall survival, and organ preservation rate.

Results: Margins were negative in 180 patients, close in 40, and positive in 54. A second laser resection was performed in 36 of 94 patients with close or positive margins. Radiotherapy was administered to 36 patients. Patients with close or positive margins who did not undergo further treatment had a greater recurrence risk (hazard ratio, 2.53; 95% confidence interval, 0.97-6.59, $P=.06$) than did those with negative margins, mainly owing to relapses in 5 of the 8 protocol breakers with positive margins not treated further. Eight-year relapse-free survival was 88.2%, 5-year overall survival was 90.9%, and the larynx was preserved in 97.1%.

Conclusions: Laser removal of early glottic cancer is oncologically adequate with margins greater than 1 mm from the tumor edge. Positive margins require further treatment; close margins may require further treatment depending on tumor characteristics.

Arch Otolaryngol Head Neck Surg. 2009;135(4):385-390

Follow-up data
Median range 58 months (7-104)

Recurrences	28 (10.2%)
Local	25 (9.1%)
Regional	3 (1.1%)
Total Laryngectomy	8 (2.9%)
Endoscopic laser	14 (5.1%)
Neck dissection + RT	3(1.1%)
RT/CHT	3(1.1%)
Alive without disease:	243 (88.7%)
alive with disease:	1 (0.4%)
Died from disease:	6 (2.2%)
Died from other cause:	24 (8.7%)

"How can we further improve?"

- Better knowledge of laryngeal cancer

- improvement in early diagnosis
- improvement in staging

MORPHOLOGIC AND FUNCTIONAL IMAGING

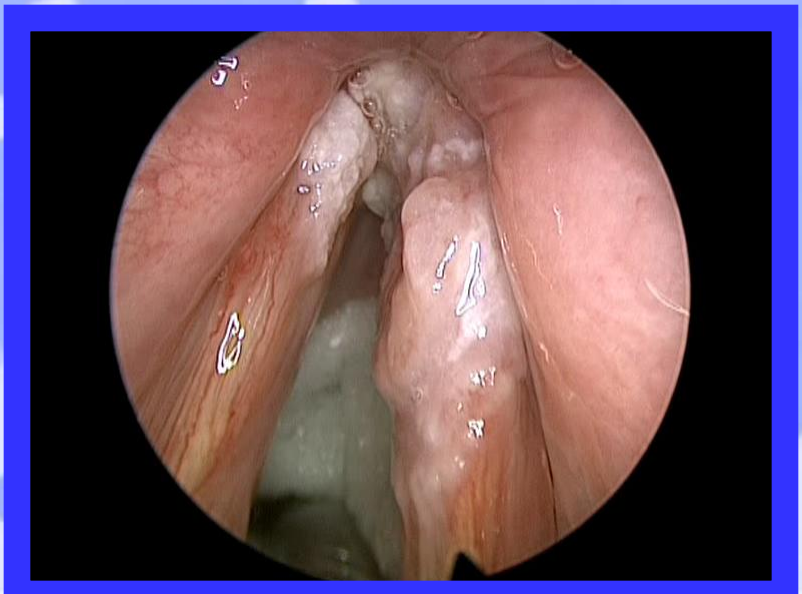
LORENZO PREDA

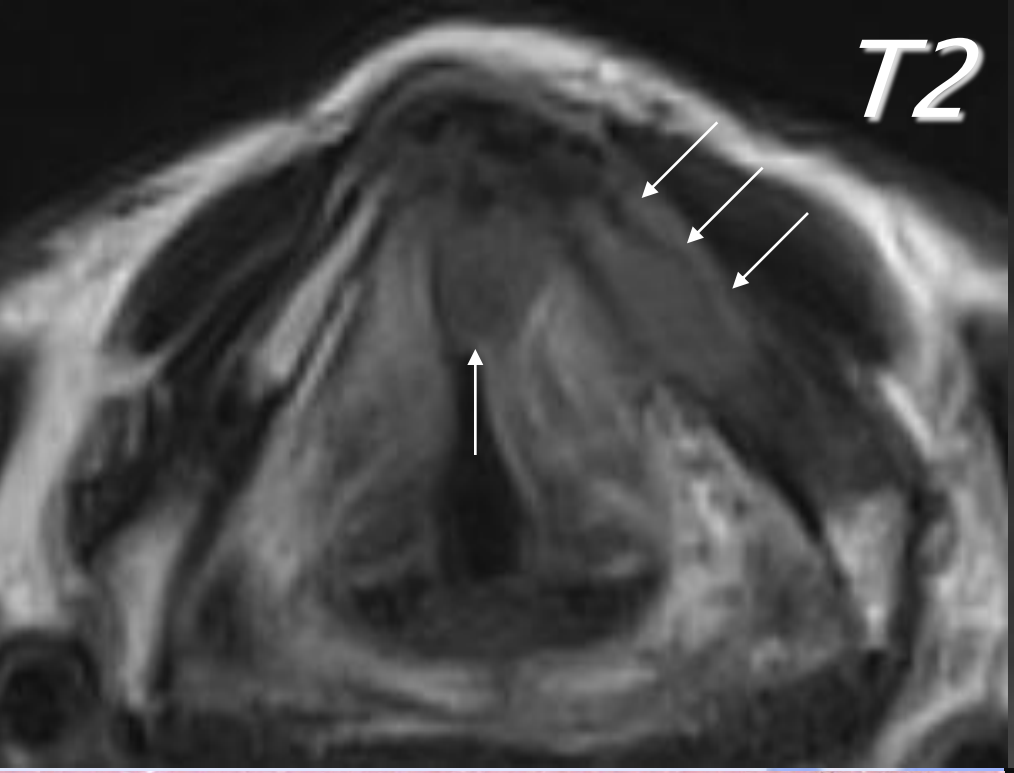
Division of Radiology

- Early and superficial spreading cancers (Tis, T1a)

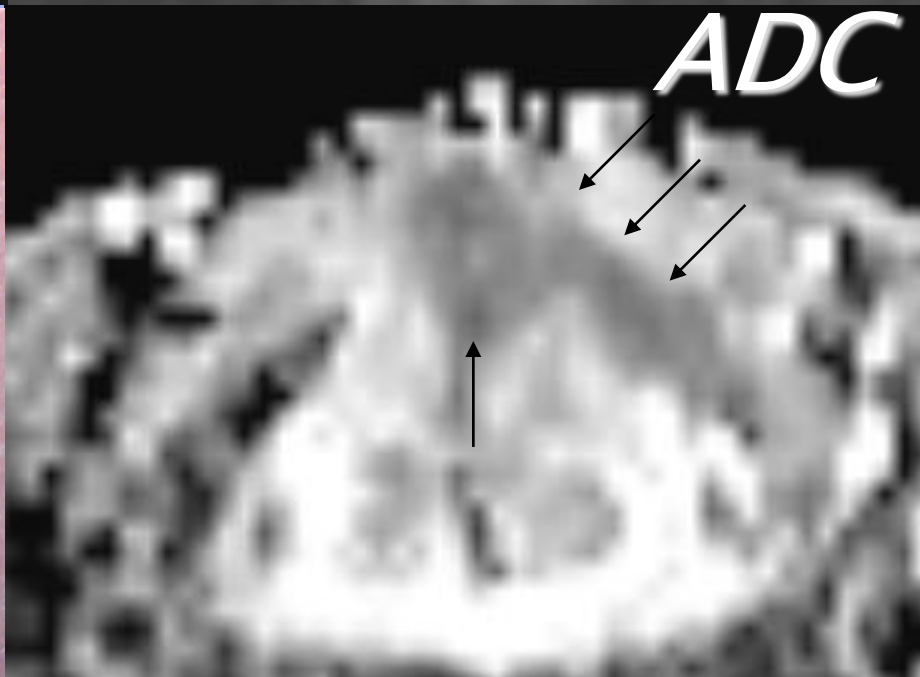
  → ***clinical diagnosis*** *(endoscopy, biopsy)*
- Deep extension below the mucosa (PES, PGS)
- Cartilagineous framework involvement
- Early extralaryngeal extension

  → ***imaging*** *(MDCT, MRI)*




T2


DWI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CONCLUSIONS

- Endoscopic and radiological evaluation are complementary
- MDCT (1st line modality) answers most questions needed for therapy planning
- MRI has a greater potential for discrimination of PGS involvement and intracartilagineous spread
- DWI-MR improves differentiation of tumor from non-tumor
- MRI examination time (pt cooperation) is still a problem

New diagnostic modalities: Narrow-band imaging (NBI)

NBI AND HDTV TECHNOLOGIES

INTRAOPERATIVE EVALUATION BY RIGID ENDOSCOPY

NBI AND HDTV TECHNOLOGIES

ATYPICAL VASCULAR GROWTH

CONCLUSIONS

- **NBI is an endoscopic technique which allows to avoid extensive tissue manipulation or staining**

- **It doesn't prolong the time needed for patient evaluation**

- **It improves:**
  - **early detection of persistences or recurrences**
  - **identificatin of synchronous and metachronous tumors**
  - **definition of tumor margins**

Robotic Surgery at the IEO

In November 2006 the European Institute of Oncology (IEO) began using the daVinci Surgical System®

July 2007
First supraglottic laryngectomy
In IEO

We compared the first 10 supraglottic laryngectomies conducted with laser CO2 (2002-2005), with the first 10 performed robotically (2007- 2010), in terms of oncological and functional results. We also analysed the costs and complications of each approach.

Table 3.

Characteristics	Laryngectomy Surgery Robotic 07/2007 – 08/2010 (N=10)	Laryngectomy Surgery Laser CO_2 10/2002 – 06/2005 (N=10)
Post surgery length of stay		
Mean±sd	11±5	13±6
Median (range)	10 (4-18)	11 (6-22)
Major Post-operative Complication		
No	9(90%)	7 (70%)
Yes	1 (10%)*	3 (30%)**
Tracheotomy		
No	2 (20%)	4 (40%)
Yes	8 (80%)	6 (60%)
Feeding tube		
No	4 (40%)	6 (60%)
Yes	6 (60%)	4 (40%)
PEG		
No	9 (90%)	10 (100%)
Yes	1 (10%)	0

* 1 pt severe dysphagia(discharged with FD)

** 1 bleeding, 1 pleural effusion , 1 dyspnea

Table 5. Results

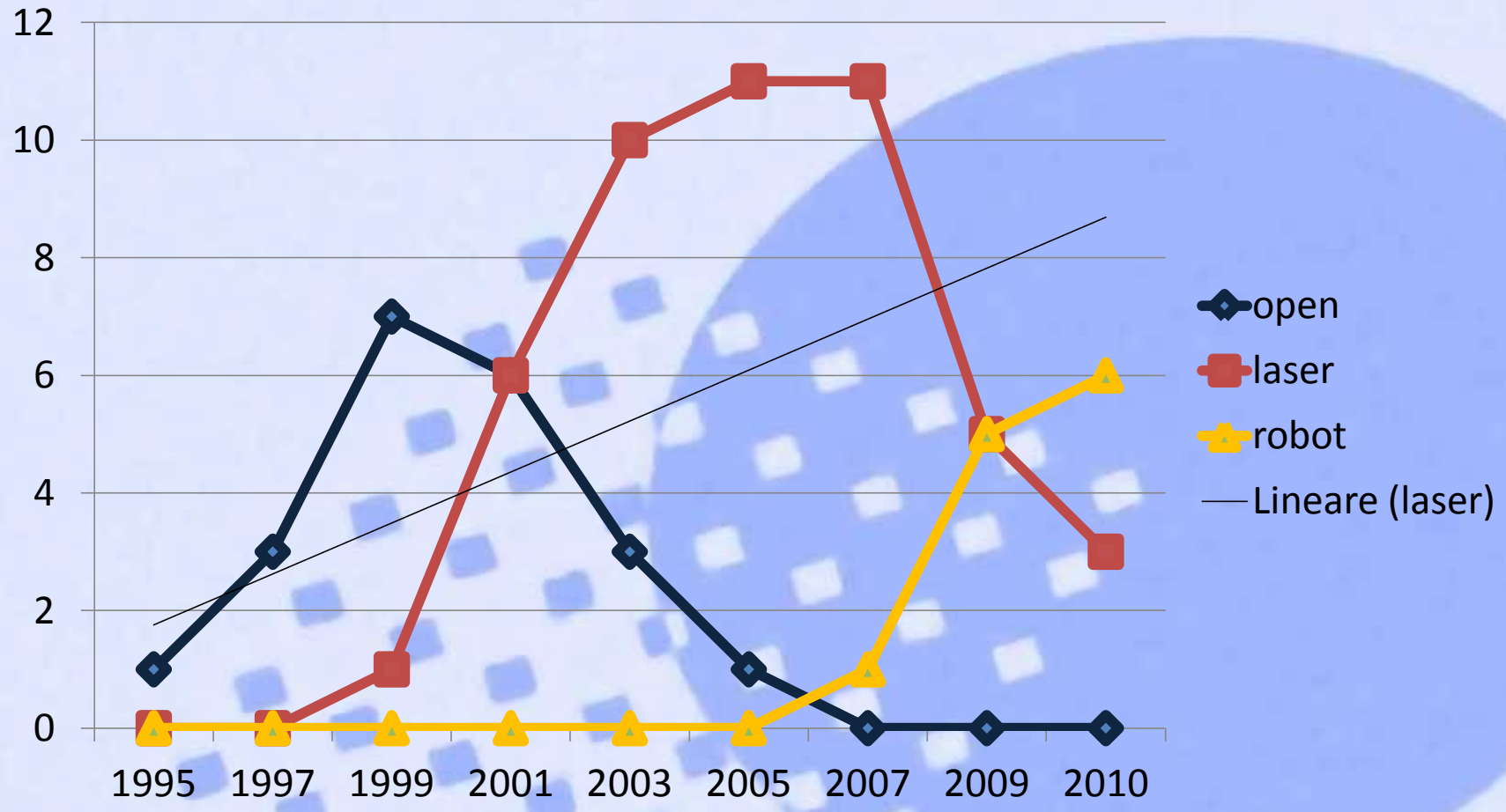
Characteristics	Laryngectomy Surgery	
	Robotic 07/2007 – 08/2010 (N=10)	Laser CO_2 10/2002 – 06/2005 (N=10)
Follow up	Median 19 months (5-37 months)	Median 76 months (44-102 months)
NED	9 (90%)	8 (80%)
DOD	0 (-)	2 (20%)
LOST FU	1 (10%)	0 (-)
Tracheotomy		
No	9 (90%)	8 (80%)
Yes	1 (10%)	2 (10%)
PEG		
No	10 (100%)	10 (10%)
Yes	0	0
Mean Op. time	2,05 (1.10- 4.20)	3.10(1.35-5.10)
Mean Cost (€)	6440	4740

Robot --> 1 rec N after 16 m (underwent CT + RT

Laser Co2 --> 2 rec T (median 50 m (35-65 m) --> 1 LT and 1 LT+RT;

1 II tumor (oropharynx after 60 m --> palliative cure

Surgical treatment of supraglottic cancer in IEO



Conclusion

The key point emerging from this study is that the preliminary oncological and functional outcome of each method is almost the same, but robotic-assisted surgery seems to have a learning curve and surgical time that are faster than endoscopic laser surgery. By contrast, the cost of robotic surgery is currently higher than that of endoscopic laser surgery.

TORS is currently the primary option for supraglottic cancer in IEO