

# Larynx Hypopharynx

- Moderation Rainald Knecht, Hamburg
- State of the art Jean Louis Lefebvre, Lille
- Debate pro CRT Jan Klozar, Prague  
contra CRT Marshall Posner, Boston
- Clinical cases all

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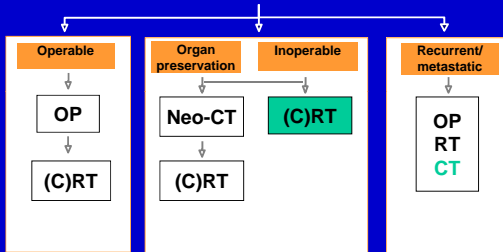
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# Therapy algorithms

Head and neck carcinoma




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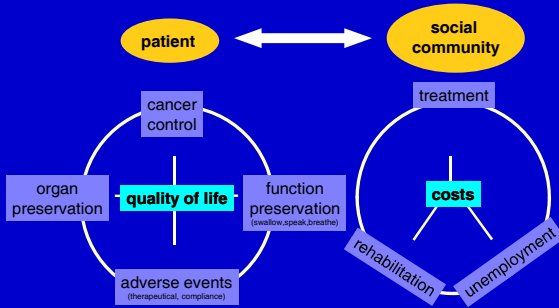
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# Why larynx preservation at all ?




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**main publications on nonsurgical larynx preservation**

**Veterans Affair, N Engl J Med 1991, 324:1685-90 (Larynx)**

**Lefebvre et al., J Natl Cancer Inst, 1996, 88:890-99(Hypopharynx)**

**Forastiere et al., N Engl J Med 2003, 349:2091-2098 (Larynx)**

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**1.Generation Larynx preservation(Larynx/Hypopharynx CA)**

**58% larynx preservation**

Lefebvre JL, et al. ASCO 2004: Abstract 5531.

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**RTOG 91-11(Laryngeal Cancer,III-IV)**  
5-year Results (med foll up 6.9 yrs)

	CRT	I + RT	RT
Lx Preserv	84%	70%	66%
LR Control	69%	55%	51%
Dist. Mets	13%	14%	22%
LF Survival	47%	45%	34%
DF Survival	39%	39%	27%
Survival	55%	59%	54%

Forastiere AA et al. ASCO 2006 Atlanta, abstract # 5517; Forastiere A et al. N Engl J Med 2003;349:2091-8

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**remission rate with Induction chemotherapy in advanced HNSCC**

	CR	PR	RR
Cisplatin (100mg/m <sup>2</sup> ) 5-Fluorouracil (5000mg/m <sup>2</sup> ) 2-3 Zyklen	33%	53%	68%
Cisplatin (100mg/m <sup>2</sup> ) 5-Fluorouracil (5000mg/m <sup>2</sup> ) EORTC, 1996	43%	43%	86%
Docetaxel (100mg/m <sup>2</sup> ) 1-8 Zyklen	11%	31%	43%
Docetaxel (80mg/m <sup>2</sup> ) Cisplatin (70mg/m <sup>2</sup> ) 1-3 Zyklen	25%	51%	76%
Docetaxel (75mg/m <sup>2</sup> ) Cisplatin (75mg/m <sup>2</sup> ) 1-3 Zyklen	29%	26%	55%
Docetaxel (80mg/m <sup>2</sup> ) Cisplatin (70mg/m <sup>2</sup> ) 1-3 Zyklen	14%	60%	74%
Docetaxel (75mg/m <sup>2</sup> ) Cisplatin (75mg/m <sup>2</sup> ) 4 Zyklen	17%	48%	65%
Docetaxel (75mg/m <sup>2</sup> ) Cisplatin (100mg/m <sup>2</sup> ) 5-Fluorouracil (4000mg/m <sup>2</sup> ) 4 Zyklen	47%	53%	100%

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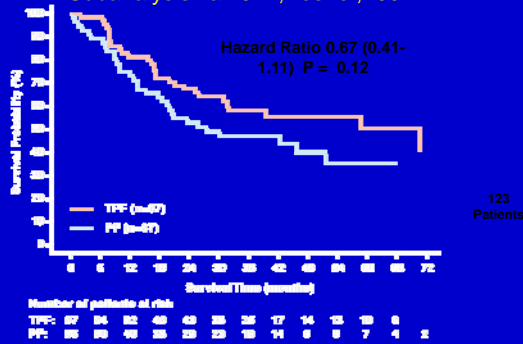
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**OS "Operable" Hypopharynx and Larynx  
Subanalysis Tax 324, Posner, 2007**




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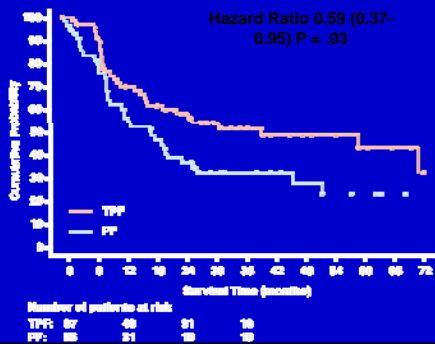
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**LFS "Operable" Hypopharynx and Larynx  
Subanalysis Tax 324, Posner, 2007**




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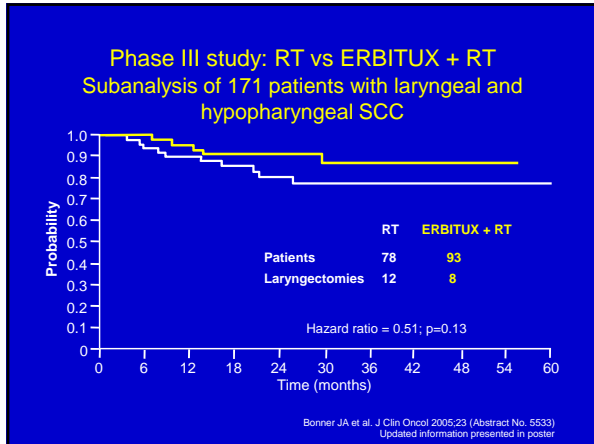
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### Phase III study: RT vs ERBITUX + RT (1) Subanalysis of 171 patients with laryngeal and hypopharyngeal SCC

Treatment	Laryngeal preservation	
	2-year rate	3-year rate
RT alone (n=78)	83%	80%
ERBITUX + RT (n=93)	92%	88%

Bonner J et al. ASCO Annual Meeting, Orlando (2005) (Abstract No. 5533)

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### State of the art?

primary treatment

**Surgery** Total LE only T4?  
 TLS,CCS,CHEP at all?  
 Neck dissection(XRT) when?

**Radio/Chemo Therapy**  
 combined(CRT) or sequential(I+RT)  
 normofract.or hyerfract.accel.RT  
 bioradiation(EGFR):replacing or adding to

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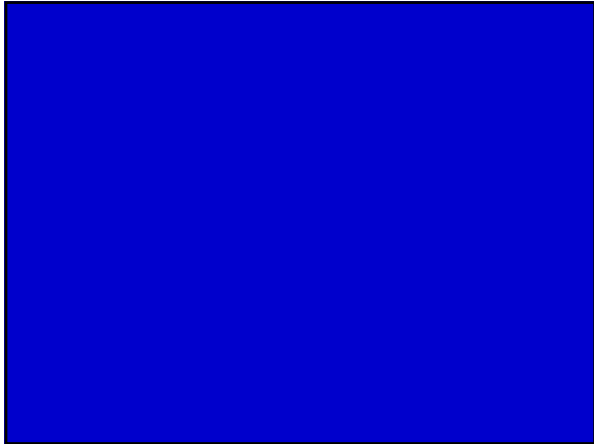
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### RTOG 91-11(Laryngeal Cancer,III-IV) 5-year Results (med foll up 6.9 yrs)

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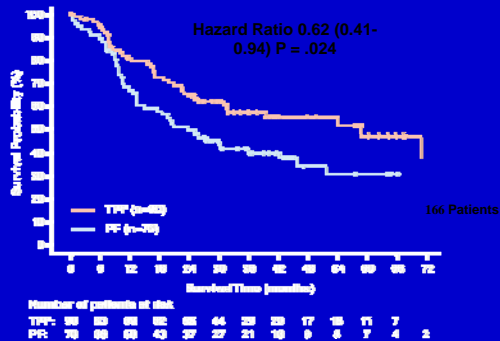
Table 2. Grade 3 or 4 Acute Toxic Effects, According to the Treatment Group.\*

Toxic Effect	Cisplatin plus Fluorouracil Followed by Radiotherapy (N=168)			Radiotherapy with Concurrent Cisplatin (N=171)			Radiotherapy Alone (N=171)		
	grade 3	grade 4	total	grade 3	grade 4	total	grade 3	grade 4	total
Hematologic	43	44	87 (52)	13	10	23 (15)	64	17	81 (47)
Infection	4	5	9 (5)	2	0	2 (1)	7	0	7 (4)
Mucosal (stomatitis)	27	7	34 (20)	36	2	38 (24)	64	9	73 (43)
Pharyngeal or esophageal	—	—	—	30	0	30 (19)	60	0	60 (35)
Laryngeal	—	—	—	20	1	21 (13)	29	2	31 (18)
Dermatologic (in radiation field)	—	—	—	16	0	16 (10)	10	2	12 (7)
Nausea or vomiting	20	3	23 (14)	0	0	0	28	7	35 (20)
Renal or genitourinary	3	0	3 (2)	2	0	2 (1)	6	1	7 (4)
Neurologic	5	1	6 (4)	0	0	0	8	1	9 (5)
Other	20	7	27 (16)	16	2	18 (12)	58	11	69 (40)
Overall maximal severity	62	49	111 (66)	66	13	79 (51)	99	32	131 (77)

\* Dashes denote not applicable.



## Larynx and Hypopharynx Overall Survival




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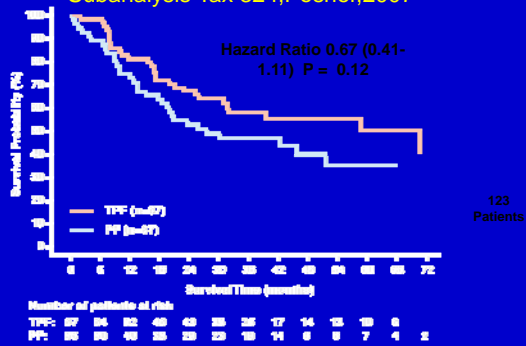
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## OS "Operable" Hypopharynx and Larynx Subanalysis Tax 324, Posner, 2007




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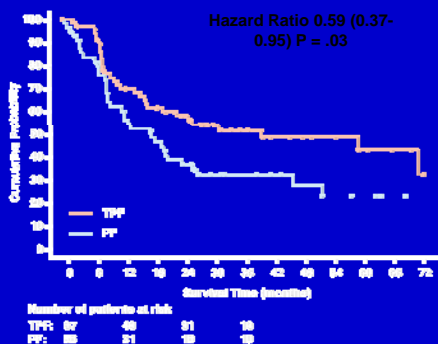
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## LFS "Operable" Hypopharynx and Larynx Subanalysis Tax 324, Posner, 2007




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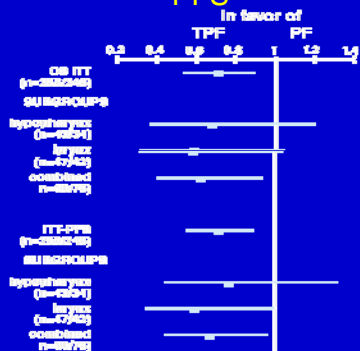
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## Larynx and Hypopharynx OS and PFS




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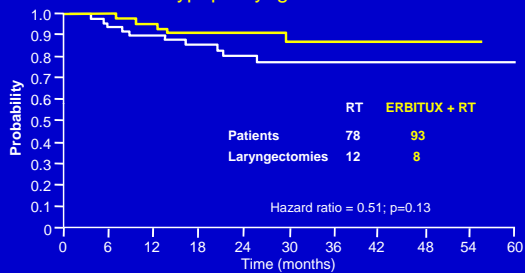
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## Phase III study: RT vs ERBITUX + RT Subanalysis of 171 patients with laryngeal and hypopharyngeal SCC



Bonner JA et al. J Clin Oncol 2005;23 (Abstract No. 5533)  
Updated information presented in poster

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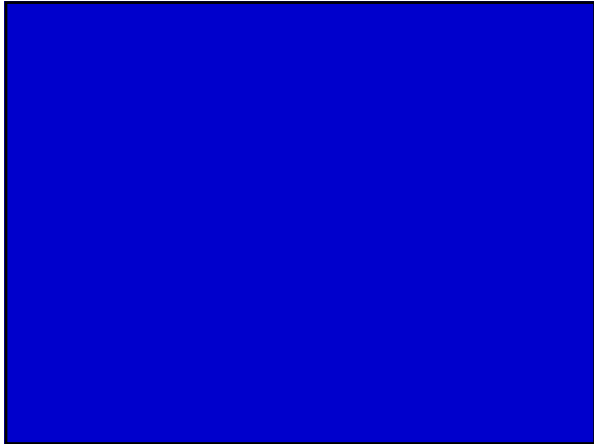
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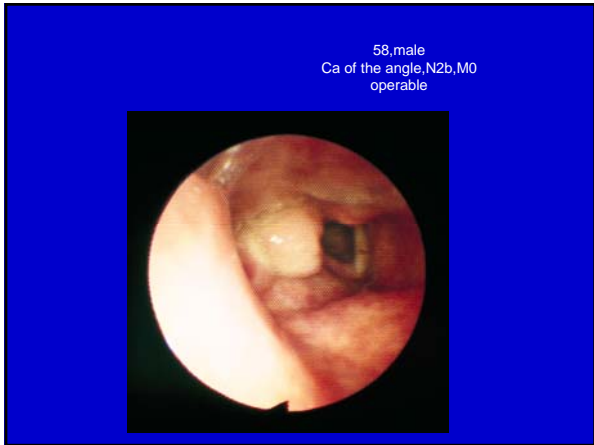
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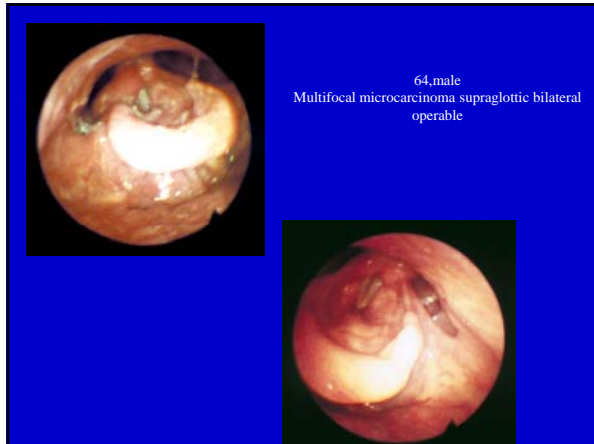
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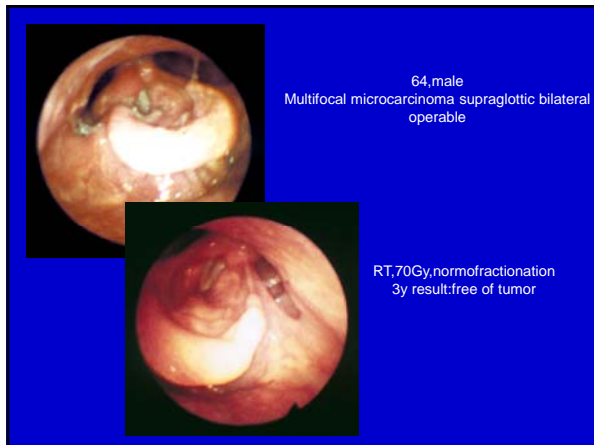
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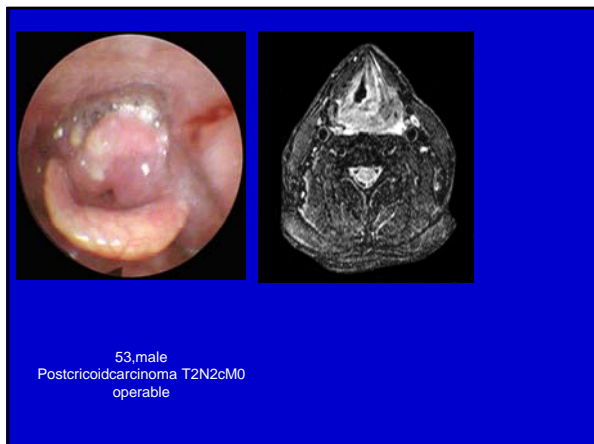
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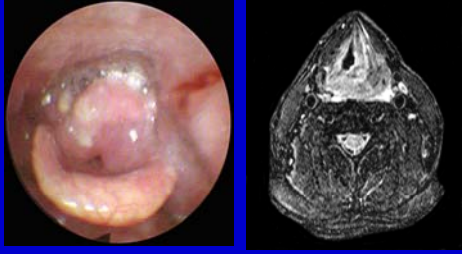
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53, male  
Postcricoidcarcinoma T2N2cM0  
operable

Laryngoprotect study, Phase II  
3 Cycl Induction TPF, Posner Prot.  
CR  
CRT, RTOG 91-11

3y result: no recurrence  
no late toxicity

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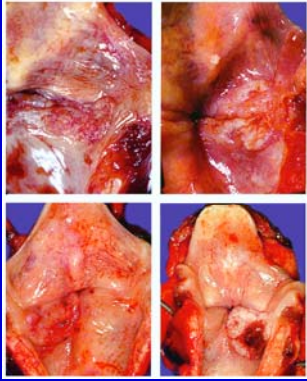
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**Vocal cord**  
T<sub>2</sub> / T<sub>3</sub>  
N<sub>0</sub> / N<sub>1</sub> / N<sub>2a/b/c</sub> / N<sub>3</sub>

**Surgery**  
CCS  
TLS  
SCPL  
neck dissection  
comprehensive / selective

**Radiation** (2-D CRT/IMRT)  
standard  
hyperfractionated/accelerated(protocol?)

**Chemotherapy**  
neoadjuvant (protocol?)  
concurrent (protocol?)

**Other therapy**

Larynx preservation / function  
tumor control  
adverse events (CTCAE v3.0)  
survival

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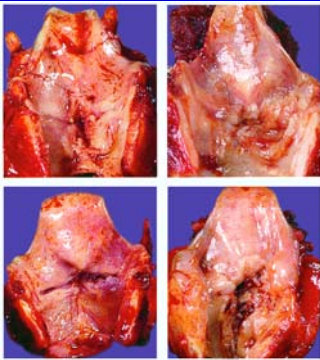
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**Vocal cord**  
T<sub>4a</sub>  
N<sub>1</sub> / N<sub>2a/b/c</sub> / N<sub>3</sub>

**Surgery**  
CCS  
TLS  
SCPL  
neck dissection  
comprehensive / selective

**Radiation** (2-D CRT/IMRT)  
standard  
hyperfractionated/accelerated(protocol?)

**Chemotherapy**  
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