

XXXIII CONGRESSO NAZIONALE AIRO

AIRO2023

BOLOGNA,
27-29 OTTOBRE 2023

PALAZZO DEI CONGRESSI

Radioterapia Oncologica: l'evoluzione al servizio dei pazienti



Associazione Italiana
Radioterapia e Oncologia clinica

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Role of adjuvant radiotherapy in patients with laryngeal cancer treated with partial laryngectomy: A propensity score matching analysis

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No conflicts of interest to disclose

Background

- Laryngeal cancer (LC) is one of the most frequent site of disease in head and neck district and its treatment is evolved during the last years
- Organ preservation strategies in LC:
 - chemoradiation or
 - surgical resection followed by adjuvant RT and/or CHT
- Role of partial laryngectomies

Multicenter retrospective analyses to evaluate the role of PORT on oncological outcomes

Inclusion criteria:

- supraglottic or glottic cancer
- partial laryngeal surgery +/- bilateral or unilateral lymphatic dissection
- availability of subsequent clinical and radiological follow up.

Exclusion criteria:

- Stage I
- metastatic disease
- prior head and neck radiotherapy
- unavailability to sign informed consent.

- PORT according to guidelines
- If positive margins or ENE chemotherapy was added to PORT

2005-2022:

312 patients

Median age: 65 yy (38-94)

2 groups:

- 175 (56%) no PORT
- 137 (44%) PORT

Median follow up: 44,4 months

Subsite	Total 312 pts	No PORT	PORT
Glottic	182 (58%)	111 (63,5%)	71 (52%)
Sopraglottic	130 (42%)	64 (36,5%)	66 (48%)

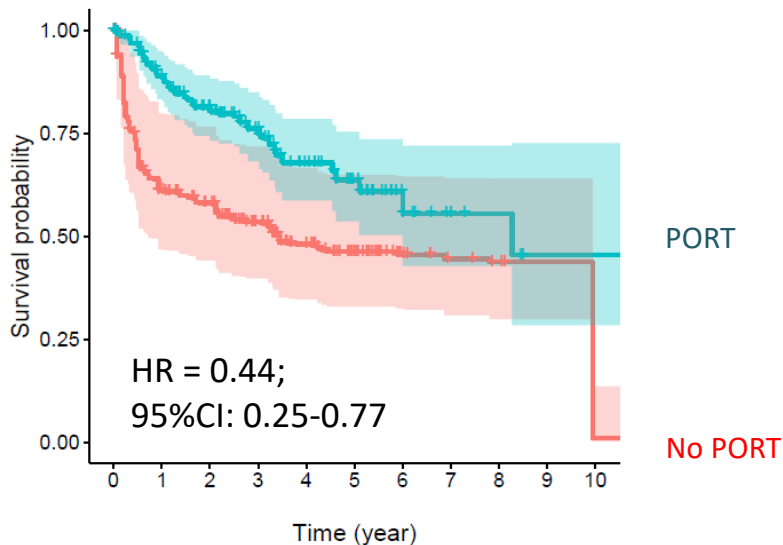
PORT (137 pts)	
RT	97 (70%)
Chemoradiation	40 (30%)

	level	No PORT	PORT	p	SMD
	n	175	137		
Age (years) (mean (SD))		66.21 (10.73)	63.69 (8.53)	0.025	-0.26
Sex (%)	M	152 (86.9)	119 (86.9)	1.000	-0.00
	F	23 (13.1)	18 (13.1)		
Tumor site (%)	Glottic	111 (63.4)	71 (51.8)	0.051	0.24
	Supraglottic	64 (36.6)	66 (48.2)		
Minor surgery (%)	Single	13 (7.4)	6 (4.4)	0.143	-0.13
	Multiple	9 (5.1)	14 (10.2)		0.19
	None	153 (87.4)	117 (85.4)		-0.06
Type of major surgery (%)	OPHL	90 (51.4)	108 (78.8)	<0.001	-0.60
	TLM	85 (48.6)	29 (21.2)		
Neck Dissection (%)	Monolateral	49 (28.0)	37 (27.0)	<0.001	-0.02
	Bilateral	48 (27.4)	71 (51.8)		0.52
	None	78 (44.6)	29 (21.2)		-0.51
<u>Residual tumor (R) (%)</u>	R0	121 (69.1)	78 (56.9)	0.019	-0.25
	Rclose	25 (14.3)	18 (13.1)		-0.03
	R1	29 (16.6)	41 (29.9)		0.32
Grading (G) (%)	G1-2	132 (75.4)	70 (51.1)	<0.001	0.52
	G3	43 (24.6)	67 (48.9)		
<u>Tumor size and extent (T) (%)</u>	pT1-2	74 (42.3)	40 (29.2)	0.024	0.28
	pT3-4	101 (57.7)	97 (70.8)		
<u>Lymph nodes status (N) (%)</u>	pN1-3	21 (12.0)	72 (52.6)	<0.001	-0.96
	c/pN0	154 (88.0)	65 (47.4)		
<u>Perineural invasion (%)</u>	No	137 (78.3)	56 (40.9)	<0.001	0.82
	Yes	38 (21.7)	81 (59.1)		
<u>Lymphovascular invasion (%)</u>	No	134 (76.6)	48 (35.0)	<0.001	0.92
	Yes	41 (23.4)	89 (65.0)		
<u>Extranodal extension (%)</u>	No	173 (98.9)	119 (86.9)	<0.001	0.48
	Yes	2 (1.1)	18 (13.1)		

PORT group-> worst characteristics!
-> propensity score

Endpoints:
Primary: PFS
Secondary: OS, LRC

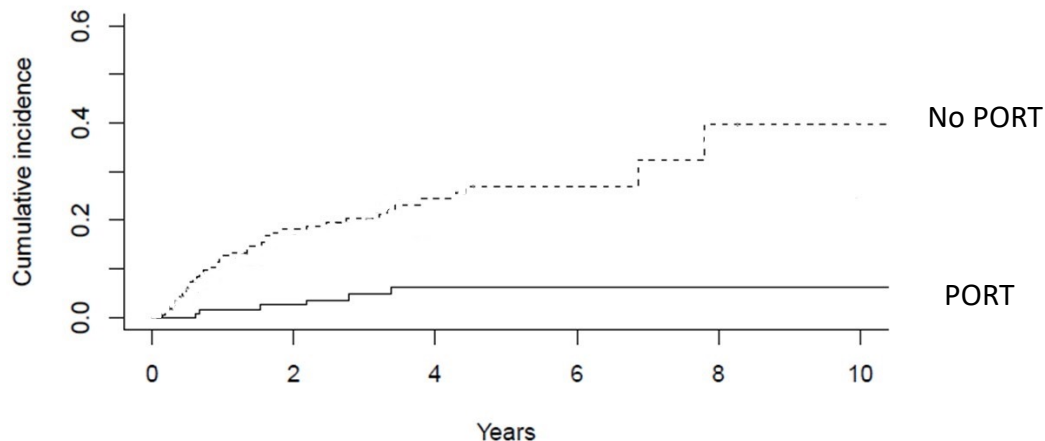
Disease free survival:



DFS	PORT % (95%CI)	No PORT % (95%CI)
2 years	80.4 (73.2, 88.2)	58.1 (44.1, 76.5)
5-years	63.6 (53.7, 75.4)	46.2 (32.9, 64.9)

PORT results in a significantly greater benefit

Local disease Control:

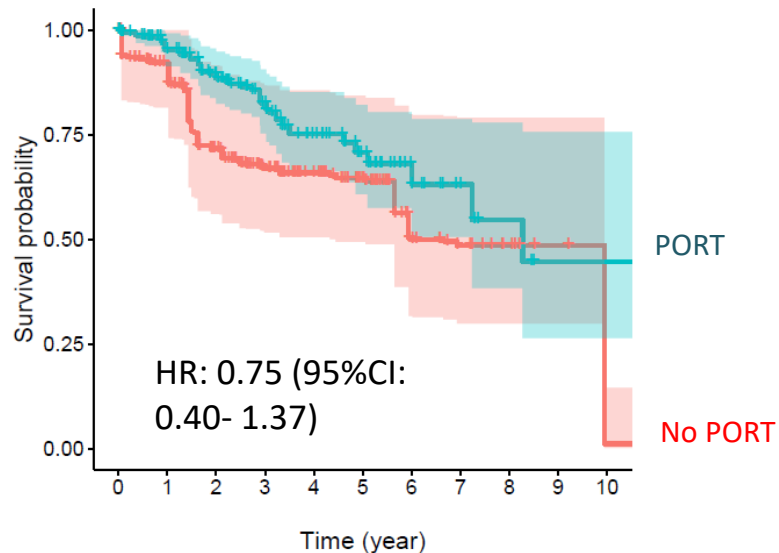


PORT: 94% risk reduction

Average treatment effect on local recurrence is strongly and consistently in favour of the PORT Group

	1 year	2 year	3 year	4 year	5 year
Adjuvant treatment , LR event	1.6 (0.01)	2.5 (0.01)	4.8 (0.02)	6.2 (0.03)	6.2 (0.03)
No adjuvant treatment , LR event	12.8 (0.03)	18.1 (0.03)	20.3 (0.03)	24.4 (0.04)	26.9 (0.04)

Overall survival:



OS	PORT % (95%CI)	No PORT % (95%CI)
2-years	88.4 (82.4, 94.8)	71.6 (56.0, 91.6)
5- years	70.7 (60.8, 82.1)	64.6 (49.4, 84.4)

Subjects with worse prognosis are expected to have poorer OS
 PORT allows them to achieve similar OS performance to subjects with better prognosis

Other

Surgery	No PORT	PORT
OPHL- 195 (62.5%)	89 (45.5%)	106 (54.5%)
TLM – 117 (37.5%)	86 (73.5%)	31 (26.5%)

No significant association between the type of major surgery (TLM vs OPHL) and OS or PFS

Conclusions:

- PORT related to significant improvement on DFS and LC
- No difference on OS but this could already indicate a therapeutic improvement
- No data on toxicity/ functional outcomes

*Thank
you!*