

XXXIII CONGRESSO NAZIONALE AIRO

# AIRO2023

BOLOGNA,  
27-29 OTTOBRE 2023

PALAZZO DEI CONGRESSI

Radioterapia Oncologica: l'evoluzione al servizio dei pazienti

## **STEREOTACTIC BODY RADIOTHERAPY IN LOCALLY ADVANCED PANCREATIC CANCER: A MULTICENTER RETROSPECTIVE ANALYSIS ON 125 PATIENTS (PAULA-1)**

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## Background:

- ✓ SBRT: high-precision image-guided delivery of ablative RT doses within a condensed treatment timeline, promoting optimal integration with CHT while minimizing its interruptions or delay in LAPC

## Aim:

- ✓ to assess LC, DMFS, and OS of LAPC treated with SBRT +/- CHT

## Material & methods:

- ✓ multicenter (15 centers) retrospective (2012-2022) observational (large DB)
- ✓ median FU: 17 months [3-92]
- ✓ neoadjuvant CHT: gemcitabine (14.9%), gemcitabine + Nab-paclitaxel (35.9%), FOLFIRINOX (41.2%), FOLFOX (8.0%)
- ✓ Median total dose= 30.0 [18.0-67.5] Gy
- ✓ Median tumor diameter= 3.7 [1.2-8.7] cm

## Results:

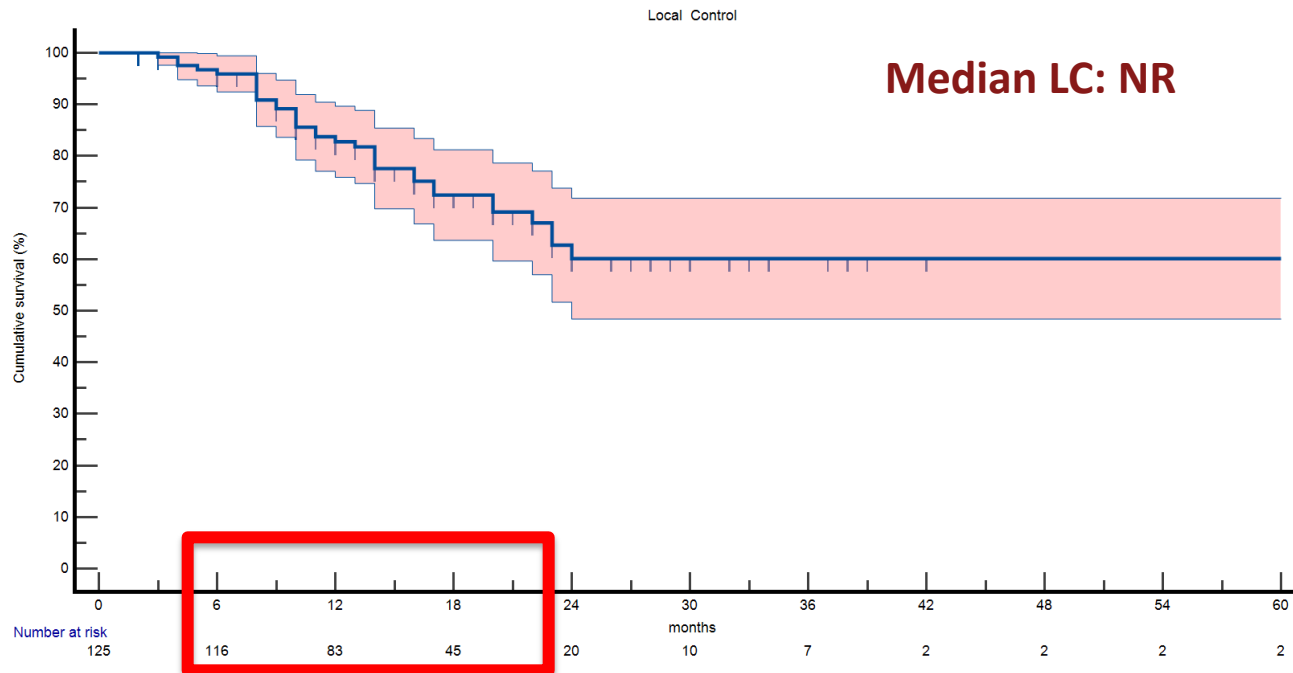


Table 1: Univariate analysis in terms of overall survival, local control, and metastasis free survival

Variable	Value	No. patients (%)	1-year LC (%)	2-year LC (%)	Median LC (months)	p	1-year DMFS (%)	2-year DMFS (%)	Median DMFS (months)	p	1-year OS (%)	2-year OS (%)	Median OS (months)	p
Age (years)	≤ 65	49 (39.2)	85.3	68.1	NR	.409	54.7	16.0	14	.094	83.7	83.6	23	.416
	> 65	76 (60.8)	81.1	54.4	NR		65.8	34.4	20		44.9	37.0	20	
ECOG	0	53 (42.4)	88.3	61.1	NR	.320	60.5	29.0	20	.800	94.1	59.7	30	.004
	1	58 (46.4)	75.7	56.6	NR		61.8	26.1	16		77.3	32.6	22	
	2	11 (8.8)	100.0	50.0	17		62.3	NE	15		80.8	12.6	16	
Tumor site	Head	78 (62.4)	84.5	51.4	NR	.749	60.4	30.4	16	.293	85.5	33.8	20	.588
	Body	39 (31.2)	81.2	70.9	NR		67.6	24.4	20		81.6	48.6	24	
	Tail	8 (6.4)	71.4	71.4	NR		28.6	NE	8		75.0	75.0	29	
Tumor diameter (cm)	≤ 3.7	62 (49.6)	75.6	52.8	24	.046	63.8	31.3	16	.379	86.4	34.2	19	.189
	> 3.7	63 (50.4)	88.7	70.7	NR		55.6	18.9	15		87.9	46.8	24	
cT stage	3	42 (33.6)	71.9	58.2	NR	<.001	53.9	13.8	14	.071	85.5	28.6	18	.026
	4	83 (66.4)	88.3	63.5	NR		64.2	32.6	20		81.6	48.4	24	
cN stage	0	87 (69.6)	82.6	56.1	NR	.396	57.8	29.8	15	.904	82.1	35.2	20	.130
	1	38 (30.4)	83.2	68.4	NR		67.5	31.8	16		86.8	505.7	26	
CA19.9 (U/mL)	≤ 267	32 (25.6)	79.7	52.9	NR	.549	58.7	27.5	16	.920	79.7	38.5	20	.510
	> 267	93 (74.4)	84.9	65.2	NR		62.2	24.4	15		86.2	42.2	23	
Neoadjuvant chemotherapy	No	38 (30.4)	74.8	70.7	NR	.713	56.5	19.4	13	.422	65.7	17.0	15	<.001
	Yes	87 (69.6)	85.7	59.1	NR		62.1	28.9	16		91.6	50.7	26	
Neoadjuvant chemotherapy drugs	Gemcitabine	13 (14.9)	52.7	52.7	NR	.014	64.6	76.2	NR	.421	84.6	40.4	24	.042
	gemcitabine + NP	32 (35.9)	61.1	36.5	15		90.5	61.1	NR		96.8	55.3	27	
	FOLFIRINOX	35 (41.2)	70.9	21.5	21		81.8	60.9	NR		87.9	59.5	26	
	FOLFOX	7 (8.0)	28.6	NE	8		71.4	42.9	16		85.7	14.3	17	
SBRT total dose (Gy)	≤ 30	92 (73.6)	77.3	50.3	NR	.012	56.6	28.5	15	.276	79.9	37.7	20	.087
	> 30	33 (26.4)	97.0	75.6	NR		71.9	36.1	20		93.7	49.0	24	
SBRT dose/fraction (Gy)	≤ 6	85 (68.0)	81.8	57.9	NR	.913	58.9	28.2	15	.813	79.4	44.3	23	.712
	> 6	40 (32.0)	84.7	62.5	NR		64.4	24.1	19		92.4	36.6	21	

Legend: cT stage: clinical tumor stage; cN stage: clinical nodal stage; DMFS: Distant metastasis free survival; ECOG: Eastern Cooperative Oncology Group; LC: local control; NE: not evaluable; NP: Nab-paclitaxel; NR: not reached; OS: overall survival; SBRT: stereotactic body radiotherapy.

## Multivariate analysis: factors significantly improving OS:

- ✓ tumor diameter >3.7 cm: HR: 0.48, 95%CI 0.25-0.90 (p=0.022)
- ✓ cT4 tumor stage HR: 0.34, 95%CI 0.15-0.77 (p=0.010)
- ✓ Nab-placlitaxel or FOLFIRINOX HR: 0.34, 95%CI 0.15-0.77 (p=0.010)

## Multivariate analysis: factors significantly improving LC:

- ✓ tumor diameter >3.7 cm: HR: 0.42, 95%CI 0.19-0.93 (p=0.034)

## Conclusions:

- ✓ SBRT +/- modern CHT regimens is effective in LAPC, significantly improving OS
- ✓ Our analysis confirms our previous data on the correlation between larger and cT4 LAPC with prolonged OS