



Fondazione di Ricerca e Cura
GIOVANNI PAOLO II

RADIOTERAPIA STEREOTASSICA EXTRACRANICA IN PAZIENTI CON MALATTIA OLIGOMETASTATICA: RISULTATI DI UNO STUDIO DI DOSE- ESCALATION

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- I trattamenti stereotassici extracranici sono stati effettuati in varie neoplasie toracico-addomino-pelviche con buoni risultati sia in termini di controllo locale sia di tossicità
- Negli studi presenti in letteratura sono riportati:
 - dosi diverse
 - modalità di prescrizione diverse
 - set-up dei fasci utilizzati diversi

Studio di dose escalation

Obiettivo primario:

Definizione della dose massima tollerata (MTD) del trattamento SBRT

Obiettivo secondario:

Correlazione tra dati dosimetrici e tossicità

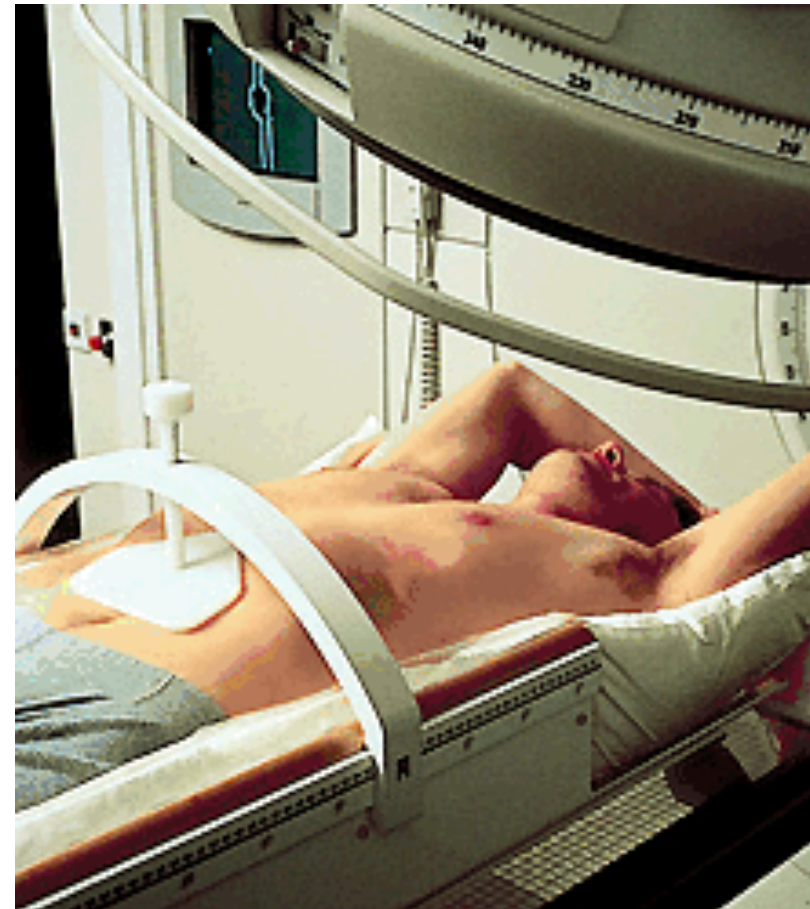
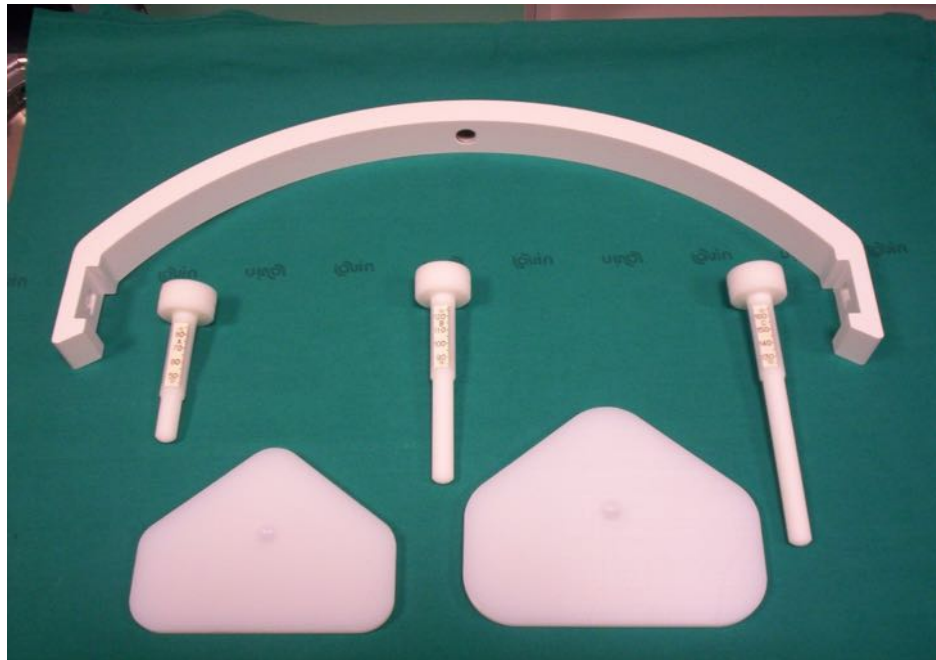
Dose Escalation STereotactic RadiOtherapY 1

Level	Lung intra-parenchymal tumors	Para-Mediastinal tumors or tumors near chest wall	Extra-thoracic tumors	Retreatment		ESRT-boost	ESRT-boost
				with prior radiotherapy dose precedente ≥ 60 Gy or retreatment of pancreatic or pelvic cancer	with prior radiotherapy < 60 Gy	(after RT dose ≤ 50 Gy)	(after RT dose > 50 Gy)
1	25 Gy	25 Gy	25 Gy	20 Gy	25 Gy	25 Gy	20 Gy
2	37.5 Gy	30 Gy	30 Gy	25 Gy	30 Gy	30 Gy	25 Gy
3	45 Gy	35 Gy	35 Gy	30 Gy	35 Gy	35 Gy	30 Gy
4	50 Gy	40 Gy	40 Gy	35 Gy	40 Gy		
5		45 Gy	45 Gy	40 Gy	45 Gy		
6		50 Gy	50 Gy	45 Gy	50 Gy		

StereoBody Frame (ELEKTA)



■ Abdominal Compression



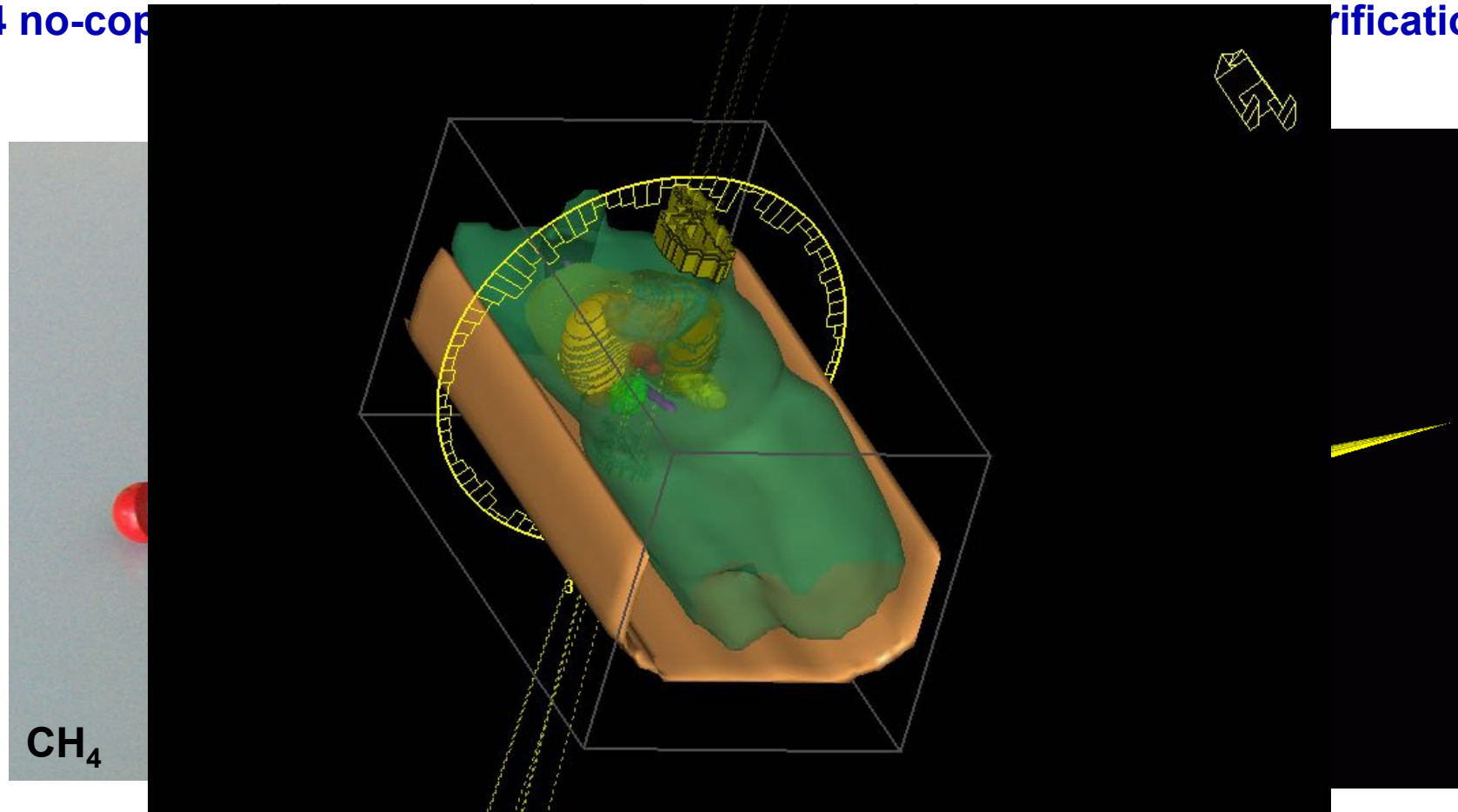
Organ Motion evaluation in all pts

PTV = CTV+5-10 mm (A-P e L-L)
CTV+5-15 mm (C-C)

Fields Set-up: tetrahedral static beam configuration: VMAT

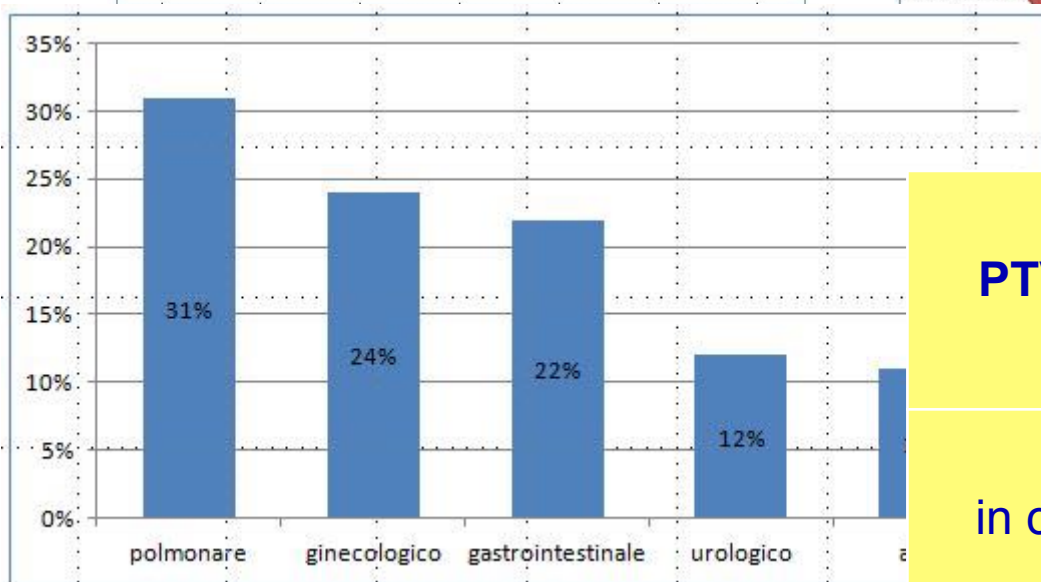
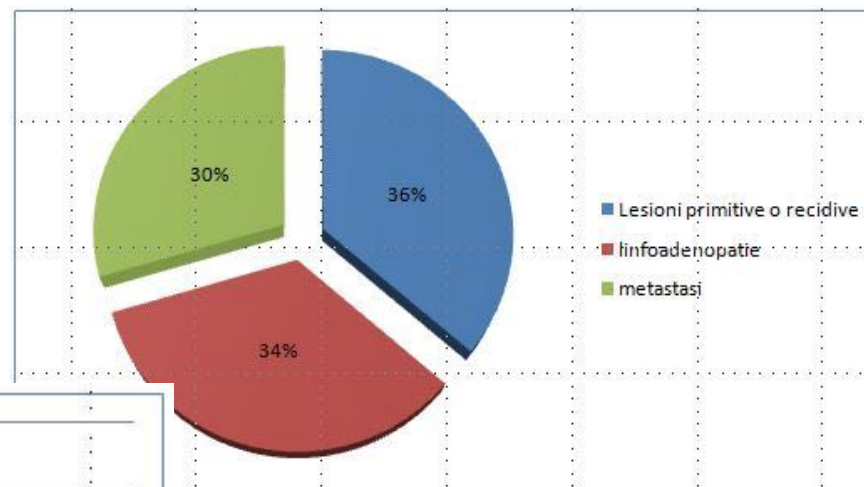
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Reference point: ICRU 62

Results: 281 lesions (213 patients)



PTV	Mean	Min	Max
in cc	34,4	1,45	281,20

Mean Dose in 5 fx: 35 Gy (20-50)

Results: 281 lesions (213 patients)

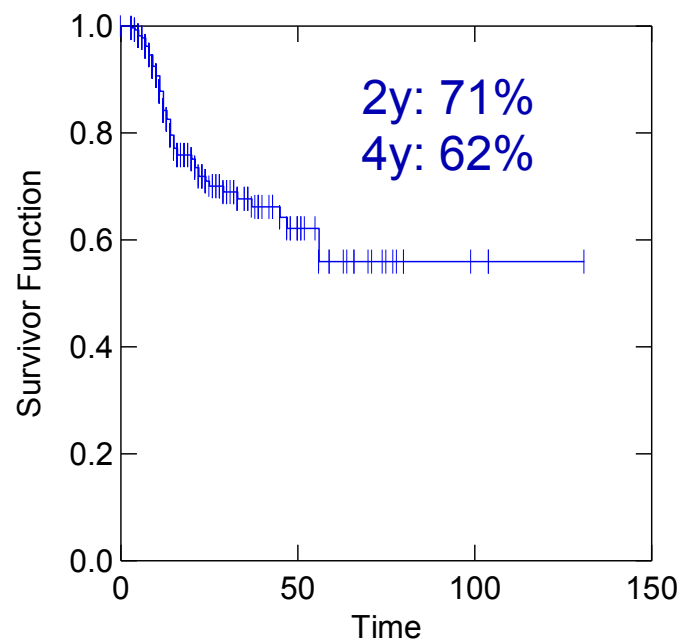
Response	%		%
OR	82	}	CR 58
PD	3		PR 24

Tox \geq G3 2

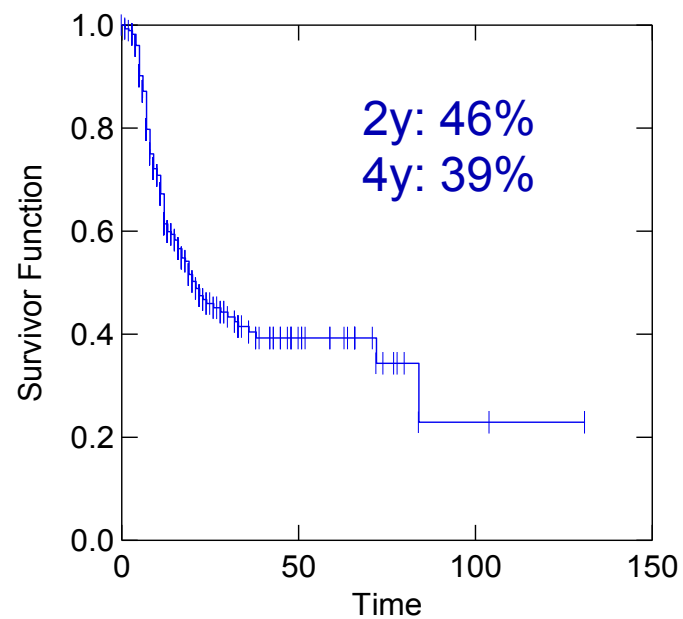
Median F-Up: 17 (3-131)

Risultati

Local Control



Distant Metastasis Free Survival



Dose Escalation STereotactic RadiOtherapY 1

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4	50 Gy	40 Gy	40 Gy	35 Gy	40 Gy		
5		45 Gy	45 Gy	40 Gy	45 Gy		
6		50 Gy	50 Gy	45 Gy	50 Gy		

- ESRT up to a dose of 50 Gy in five fractions is well tolerated as
 - exclusive treatment
 - retreatment
 - boost
- Maximum tolerated dose not reached
- Further dose escalation is ongoing

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FONDAZIONE DI RICERCA E CURA "GIOVANNI PAOLO II"

LARGO
ACOSTINO GAMBELLI

