

# Forward IMRT (fIMRT) nel trattamento palliativo delle metastasi ossee: analisi retrospettiva

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# INTRODUZIONE

- La radioterapia palliativa delle metastasi ossee è in genere eseguita con tecniche semplici
- E' associata a tassi di risposta del 50-80%
- E' associata a tossicità acuta del 11-35%

# SCOPO

Valutare la tossicità acuta e tardiva e la risposta ad un trattamento ipofrazionato delle metastasi ossee con schedula **4 Gy x 5** e tecnica **fIMRT**.



# Criteri di inclusione

- Criteri di inclusione
  - Metastasi ossee sintomatiche o a rischio di frattura
  - ECOG PS 0-3
  - Malattia non oligometastatica e/o primitivo non controllato
  - Tutte le istologie

# Meteriali e Metodi

- LINAC Oncor 6 MV
  - TC simulazione
  - TPS Pinnacle
  - Tecnica: fIMRT
- Valutazione del dolore: scale VAS
  - Valutazione della risposta: criteri di Chow  
Int. J. Radiation Oncology Biol. Phys. 2011
  - Valutazione tossicità: scale RTOG/  
EORTC
  - FUP ambulatoriale o telefonico

Table 1. Response categories

Term	Definition
Complete response	A pain score of 0 at treated site with no concomitant increase in analgesic intake (stable or reducing analgesics in daily oral morphine equivalent [OMED])
Partial response	Pain reduction of 2 or more at the treated site on a scale of 0 to 10 scale without analgesic increase, or Analgesic reduction of 25% or more from baseline without an increase in pain.
Pain progression	Increase in pain score of 2 or more above baseline at the treated site with stable OMED, or An increase of 25% or more in OMED compared with baseline with the pain score stable or 1 point above baseline
Indeterminate response*	Any response that is not captured by the complete response, partial response, or pain progression definitions

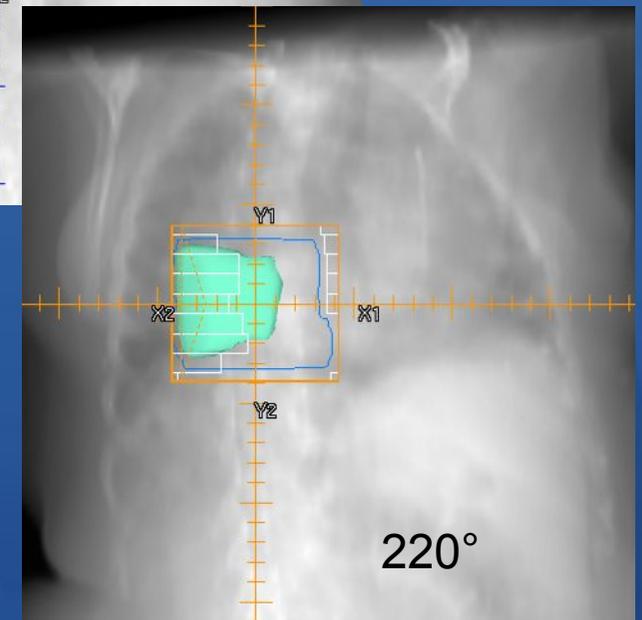
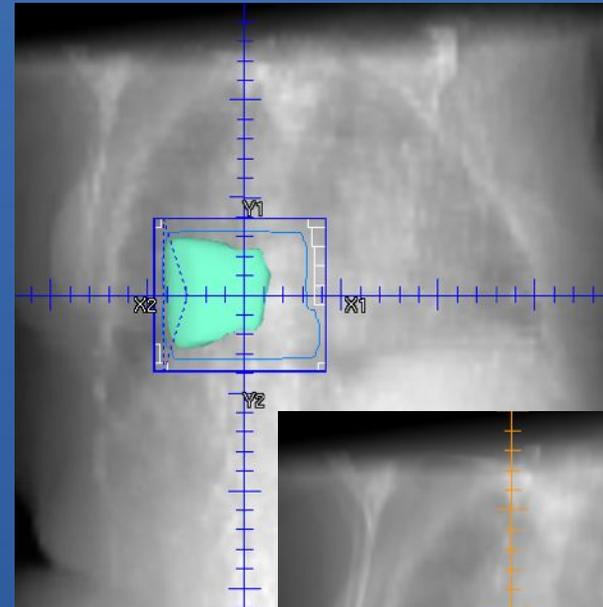
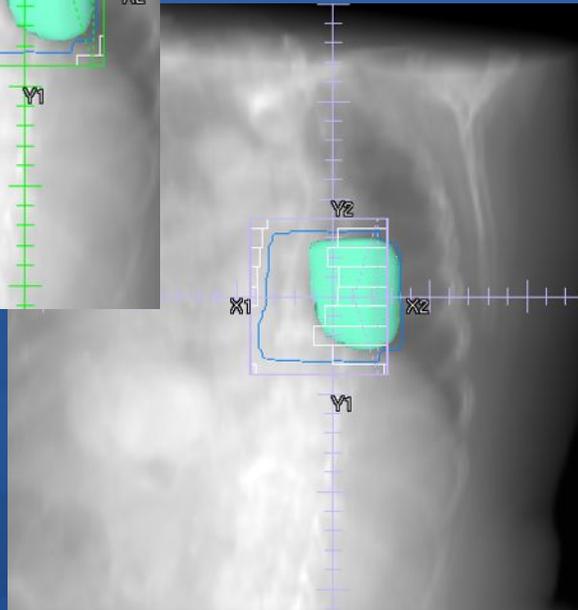
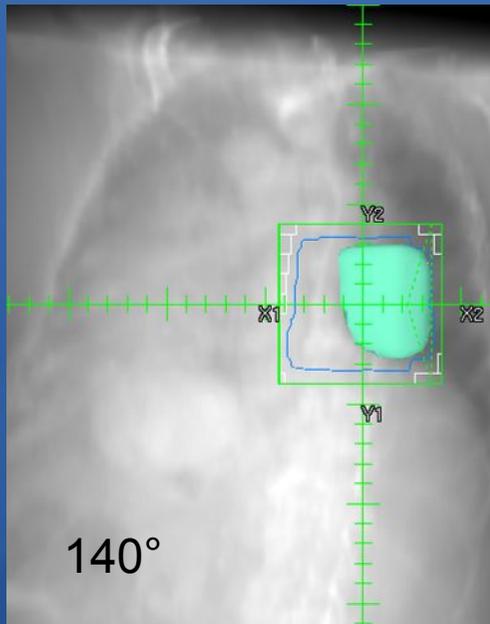
\* New addition to the previous consensus response categories.

# NOTE DI TECNICA fIMRT

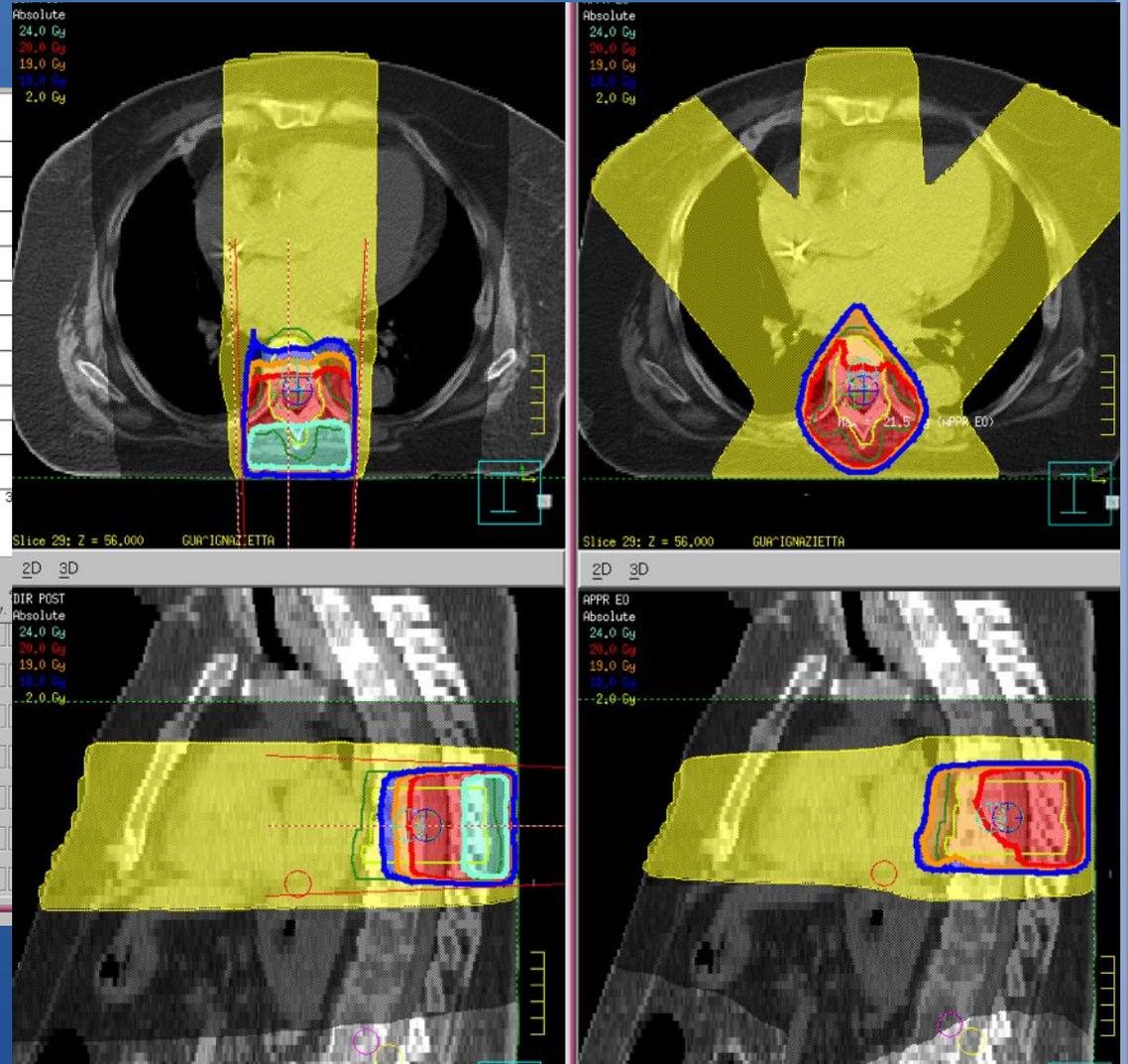
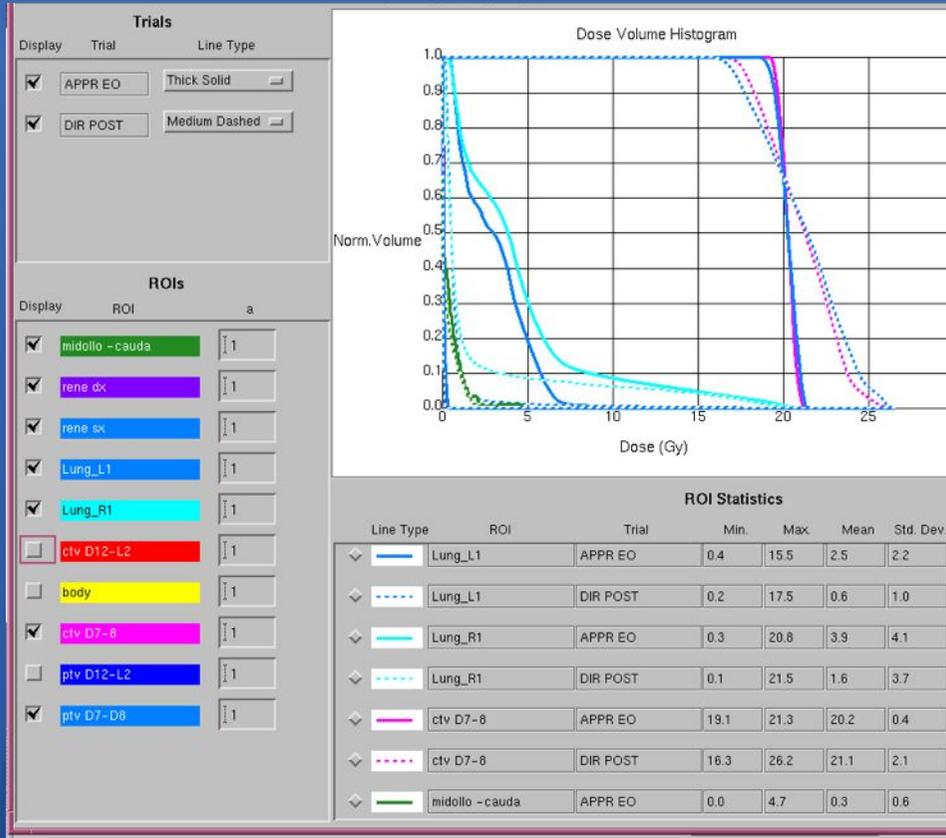
Campi multipli modulati di fotoni da 6MV

$D_{max} < 110\%$

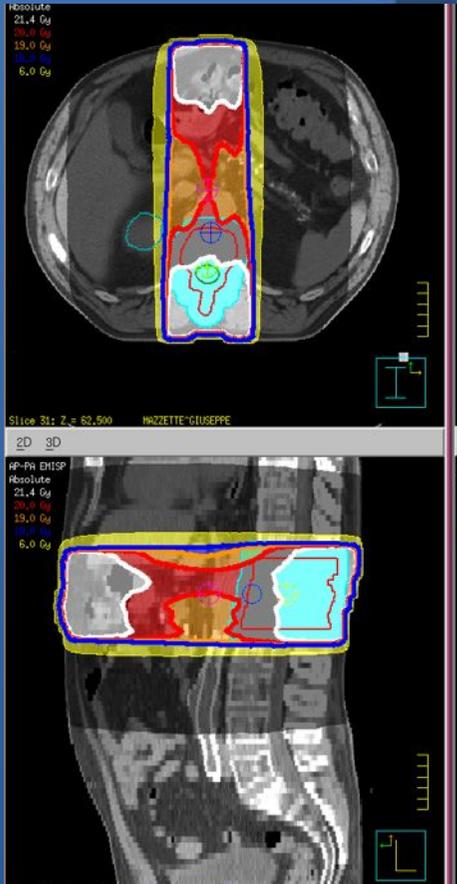
Dose PTV =  $V_{95} > 90\%$



# RACHIDE DORSALE



# RACHIDE LOMBARE



**Trials**

Display	Trial	Line Type
<input type="checkbox"/>	app	Thick Solid
<input type="checkbox"/>	DIR POST	Thick Solid
<input checked="" type="checkbox"/>	AP-PA EMISF	Thick Solid

**ROIs**

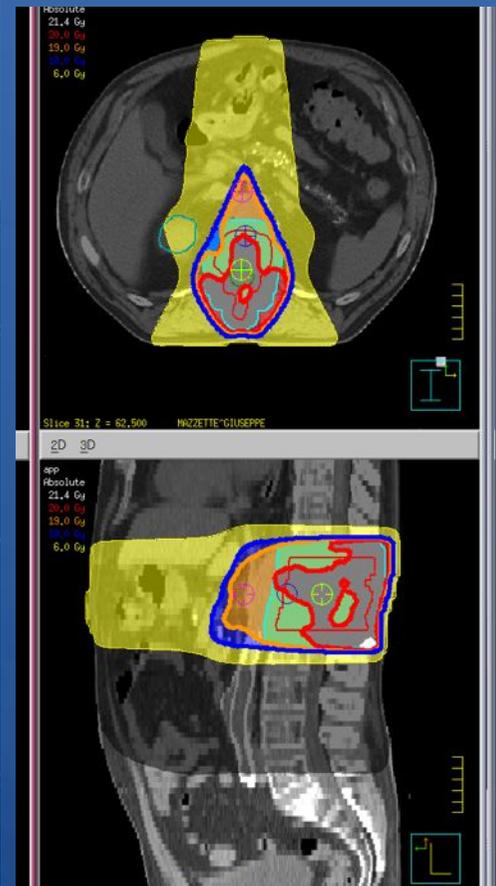
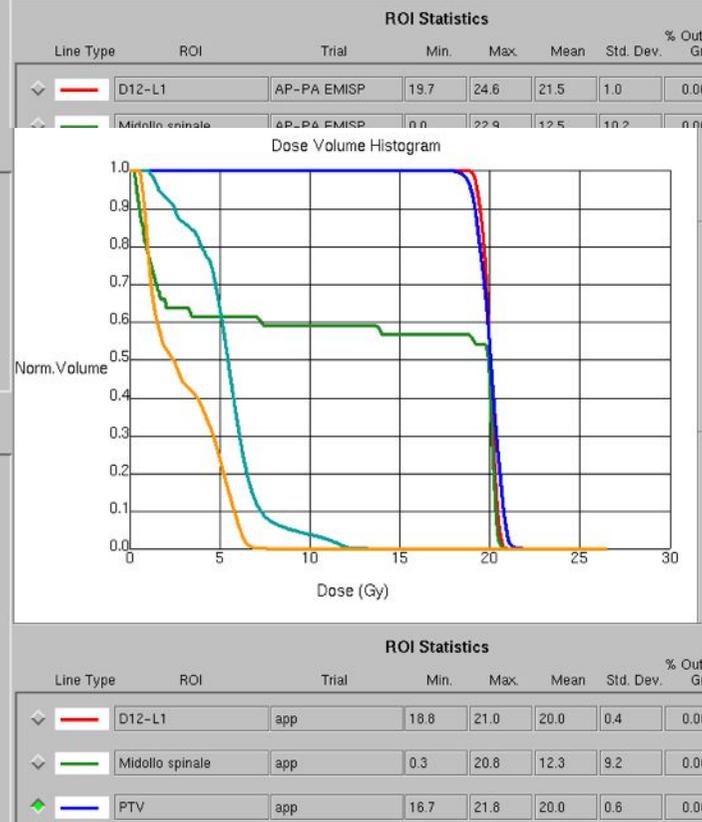
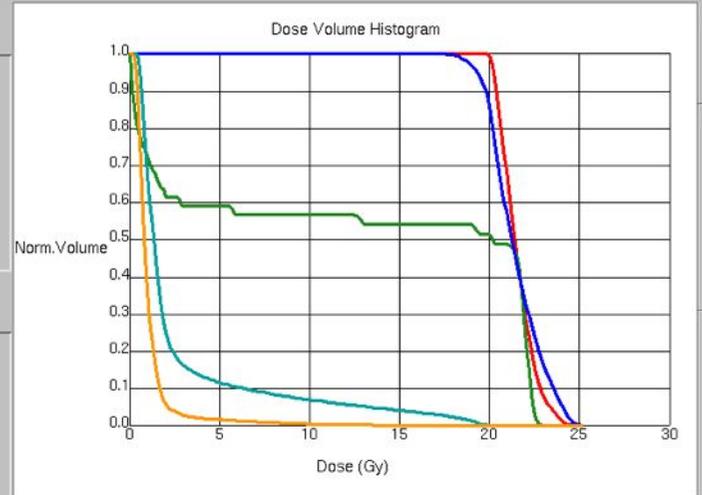
Display	ROI	a
<input type="checkbox"/>	Body	[1]
<input checked="" type="checkbox"/>	D12-L1	[1]
<input checked="" type="checkbox"/>	Rene dx	[1]
<input checked="" type="checkbox"/>	Rene sin	[1]
<input checked="" type="checkbox"/>	Midollo spinale	[1]
<input checked="" type="checkbox"/>	PTV	[1]
<input type="checkbox"/>	ROL_1	[1]

**Trials**

Display	Trial	Line Type
<input checked="" type="checkbox"/>	app	Thick Solid
<input type="checkbox"/>	DIR POST	Medium Dashed
<input type="checkbox"/>	AP-PA EMISF	X-Thick Dashed

**ROIs**

Display	ROI	a
<input type="checkbox"/>	Body	[1]
<input checked="" type="checkbox"/>	D12-L1	[1]
<input checked="" type="checkbox"/>	Rene dx	[1]
<input checked="" type="checkbox"/>	Rene sin	[1]
<input checked="" type="checkbox"/>	Midollo spinale	[1]
<input checked="" type="checkbox"/>	PTV	[1]
<input type="checkbox"/>	ROL_1	[1]



# Pazienti e Metodi

Periodo di osservazione: dicembre 2011-settembre 2014

• Pazienti trattati	64
• M/F	33/31
• ECOG 0-1	41
• ECOG 2-3	23
• Età	66,5 (45-84)
• Lesioni trattate	81 (1-4)
– Lesioni sintomatiche	67 (53 pts)
– Lesioni a rischio	13 (10 pts)
– Compressione midollare	1
• VAS max medio	6,1 (3-10)
• CT/BIO	55
• Difosfonati	38
• Metastasi singole/multiple	11/53
• Malattia viscerale	52
• fup mediano	5,77 m (0.4-30 m)
• S mediana	7,2 m(1-30m)

## SEDI IRRADIAATE

RACHIDE CERVICALE	7
RACHIDE DORSALE	28
RACHIDE LOMBARE	13
BACINO	18
MANDIBOLA	2
COSTE	7
OMERI	2
FEMORI	3
STERNO	1
N° campi	5 (3-8)

# Risultati: TOSSICITA'

## Valutabili 63/64

	Tox acuta RTOG/EORTC			Tox tardiva RTOG/EORTC		
	G1	G2	G3	G1	G2	G3
CUTE	1					
Diarrea	2	1				
Stomatite			1			
NV	1	5				
Esofagite		1				
Leucopenia	1					
Polmonare				1		
GU				1		
Flare up	3					
<b>CT/B</b>	<b>9/12</b>			<b>2/2</b>		

# RISULTATI:RISPOSTA

- RISPOSTA ANTALGICA (VALUTABILI 52/53)

– RC	23 (44%)
– RP	23 (44%)
– SD	4 (7,7%)
– PD	1 (1.5%)
– Indeterminata	1 (1,5%)

- EVENTI

– RICALCIFICAZIONE	5
– FRATTURA PATOLOGICA	3 (4.7%)
– RICOMPARSA DOLORE	3 (4.7% dopo 17-10-4,5m)
• REIRRADIAZIONE	1

# CONCLUSIONI

- Trattamento con risultato dosimetrico soddisfacente
- Trattamento efficace
- Trattamento safe

# GRAZIE PER L'ATTENZIONE

