

XXXII CONGRESSO NAZIONALE AIRO
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AIRO2022

Radioterapia di precisione per un'oncologia innovativa e sostenibile

BOLOGNA, 25-27 NOVEMBRE
PALAZZO DEI CONGRESSI

 Associazione Italiana
Radioterapia e Oncologia clinica

 Società Italiana di Radiobiologia

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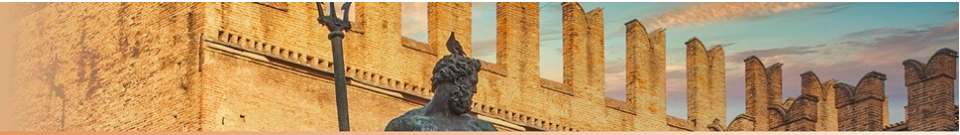
OUTCOMES OF HYPOFRACTIONATED LOCOREGIONAL RADIOTHERAPY IN ADVANCED BREAST CANCER

Roberta Tummineri

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DICHIARAZIONE

Relatore: Roberta Tummineri

Come da nuova regolamentazione della Commissione Nazionale per la Formazione Continua del Ministero della Salute, è richiesta la trasparenza delle fonti di finanziamento e dei rapporti con soggetti portatori di interessi commerciali in campo sanitario.

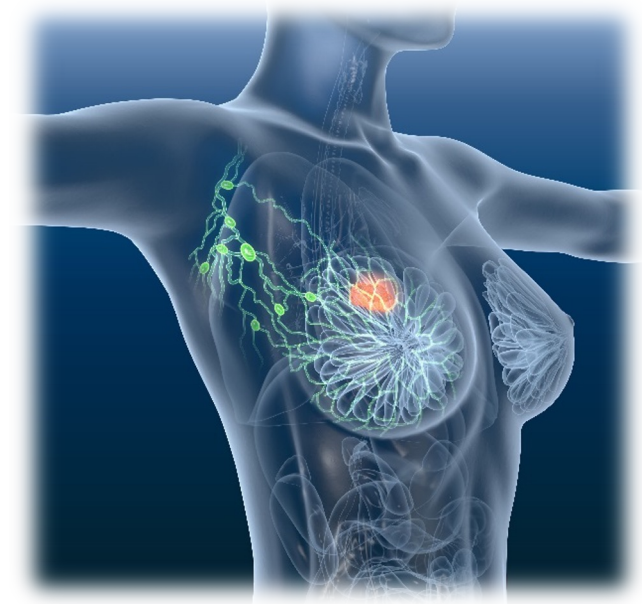
- Posizione di dipendente in aziende con interessi commerciali in campo sanitario **(NIENTE DA DICHIARARE)**
- Consulenza ad aziende con interessi commerciali in campo sanitario **(NIENTE DA DICHIARARE)**
- Fondi per la ricerca da aziende con interessi commerciali in campo sanitario **(NIENTE DA DICHIARARE)**
- Partecipazione ad Advisory Board **(NIENTE DA DICHIARARE)**
- Titolarità di brevetti in compartecipazione ad aziende con interessi commerciali in campo sanitario **(NIENTE DA DICHIARARE)**
- Partecipazioni azionarie in aziende con interessi commerciali in campo sanitario **(NIENTE DA DICHIARARE)**
- Altro: partecipazione al congresso sponsorizzata da IPSEN



Aim

Hypofractionated radiotherapy (HRT) is considered the standard treatment for breast cancer (BCa), but is generally applied for breast only RT.

We report acute and late toxicity and outcomes in patients with advanced BCa treated with HRT to breast/chest wall (WBRT) and regional lymph-nodes (LN) in our Institute.





Methods

From 03/2018-03/2022 156 WBRT+LN HRT in 154 advanced BCa pts (2 bilateral, 98% female, 2% male) were performed in our Institute.

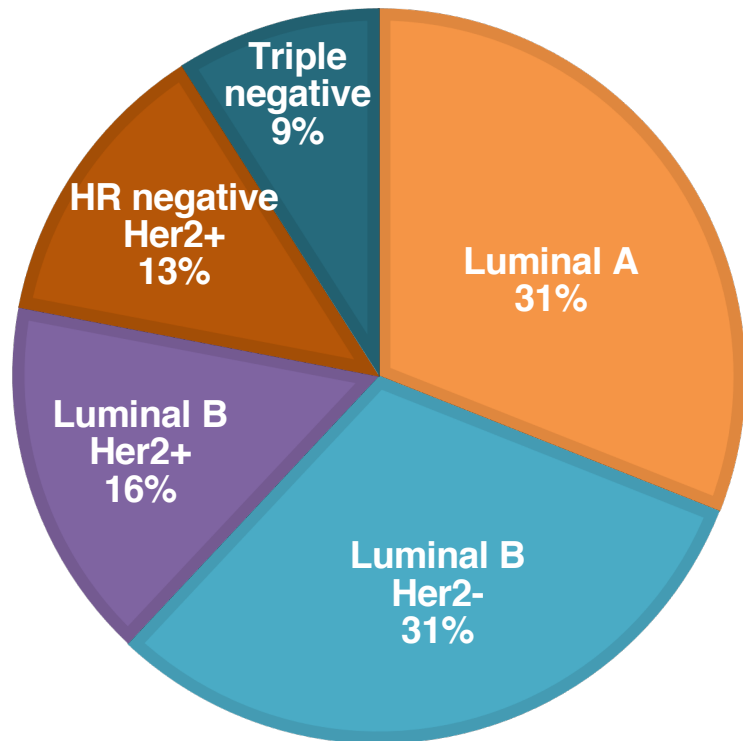
- 56% after conservative surgery
- 42% after mastectomy
- 2% as radical treatment

Median age was 52 (26-86) years.



Methods

Molecular subtypes



Chemotherapy & hormonal therapy

Neoadjuvant CHT 52%

Adjuvant CHT 55%

Concomitant CHT 2.5%

Adjuvant hormonal therapy 77%

HER2-targeted therapy 29%

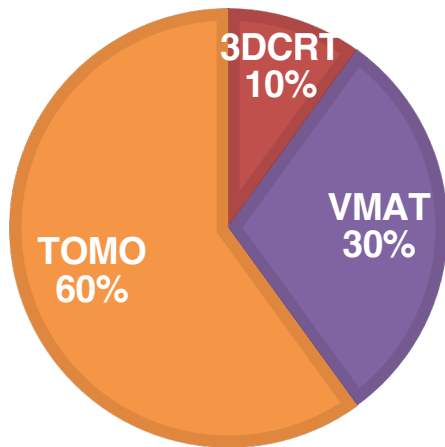


Methods

HRT dose: 40.05 Gy in 15 fractions delivered in 3 weeks.

SIB to 48 Gy to the tumor bed for pts with high-risk of local relapse (34.5%).

■ 3DCRT ■ VMAT ■ TOMO



TARGET	%	right	left
WB + SCV LN	35%	49%	51%
WB + SCV + axillary LN	17%	44%	56%
WB + SCV + axillary LN + IMC	6%	44%	56%
Chest wall + SCV LN	29%	38%	62%
Chest wall + SCV + axillary LN	6%	22%	78%
Chest wall + SCV + axillary LN + IMC	7%	55%	45%

TomoHelical
 WB + SIB
 +Axilla+SCV+IMC

Prescription Summary

Fraction Count: 15

The plan has 15 fractions defined for a planned delivery of 48.00 Gy.
 The Median dose to the PTV boost volume is 48.00 Gy.
 The modulation factor for this plan is 1.811.

Targets

Name	Display	Color
PTV Mammella	<input checked="" type="checkbox"/>	█
PTV LNF svc	<input checked="" type="checkbox"/>	█
PTV boost	<input checked="" type="checkbox"/>	█

Regions at Risk

Name	Display	Color
Cuore	<input checked="" type="checkbox"/>	█
Esofago	<input checked="" type="checkbox"/>	█
Mammella contro	<input checked="" type="checkbox"/>	█
Midollo	<input checked="" type="checkbox"/>	█
Polmone dx	<input checked="" type="checkbox"/>	█
Polmone sx	<input checked="" type="checkbox"/>	█

Fractions

Index	Locked	Dose	Duration
1	<input type="checkbox"/>	3.20	17.0
2	<input type="checkbox"/>	3.20	17.0
3	<input type="checkbox"/>	3.20	17.0
4	<input type="checkbox"/>	3.20	17.0
5	<input type="checkbox"/>	3.20	17.0
6	<input type="checkbox"/>	3.20	17.0
7	<input type="checkbox"/>	3.20	17.0
8	<input type="checkbox"/>	3.20	17.0
9	<input type="checkbox"/>	3.20	17.0
10	<input type="checkbox"/>	3.20	17.0
11	<input type="checkbox"/>	3.20	17.0

Presets

Lines

Gy %

51.8 Gy

- █ 45.6 Gy
- █ 40.0 Gy
- █ 38.0 Gy
- █ 30.0 Gy
- █ 20.0 Gy
- █ 15.0 Gy
- █ 10.0 Gy

Edit

Finalize

Dose Calc Grid: **Fine**

Final Dose

Final Accept

Generate Plan Report

STANDARD Cumulative DVH Relative

Vol Min: 0 | Vol Max: 100 | Gy Min: 0 | Gy Max: 57

Display Mode

HU Density

Transverse

Coronal

Sagittal



Results: acute toxicity

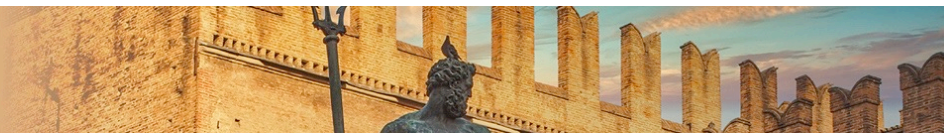
Median follow-up was 30 (7 – 68) months.

No patient experienced \geq G3 acute toxicity.

G2 skin toxicity was experienced by 16% of pts with SIB and 7.5% without SIB.

Acute Toxicity	G0			G1			G2		
	3DCRT	VMAT	Tomo	3DCRT	VMAT	Tomo	3DCRT	VMAT	Tomo
Breast/chest wall erythema	13%	15%	14%	74%	72%	73%	13%	13%	13%
Axillary/supra-clavicular erythema	27%	28%	46%	67%	67%	48%	6%	5%	6%
Dysphagia	27%	33%	31.5%	67%	52%	55%	6%	15%	13.6%

CTCAE v 5.0.

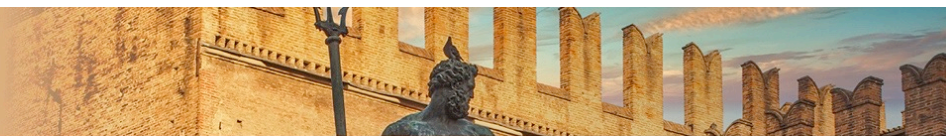


Results: late toxicity

Late Toxicity	G0			G1			G2		
	3DCRT	VMAT	Tomo	3DCRT	VMAT	Tomo	3DCRT	VMAT	Tomo
Hyperpigmentation	67%	57%	70.5%	0%	18%	22%	0%	0%	2%
Edema	67%	57%	70.5%	33%	25%	7%	0%	4.5%	2%
Fibrosis	93%	79.5%	88%	0%	11%	5%	0%	0%	0%
Pain	93%	79.5%	88%	7%	9%	3%	0%	0%	1%
Telangiectasia	93%	79.5%	88%	0%	0%	1%	0%	0%	1%

CTCAE v 5.0.

No significant differences in late toxicity were found between the different RT techniques.



Results: toxicity

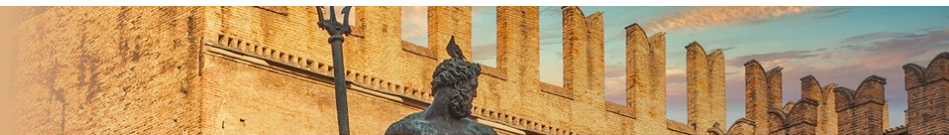
WB + SIB + SVC LN Tomotherapy



End of RT: G1 micropapular erythema



6 months after RT: G1 hyperpigmentation

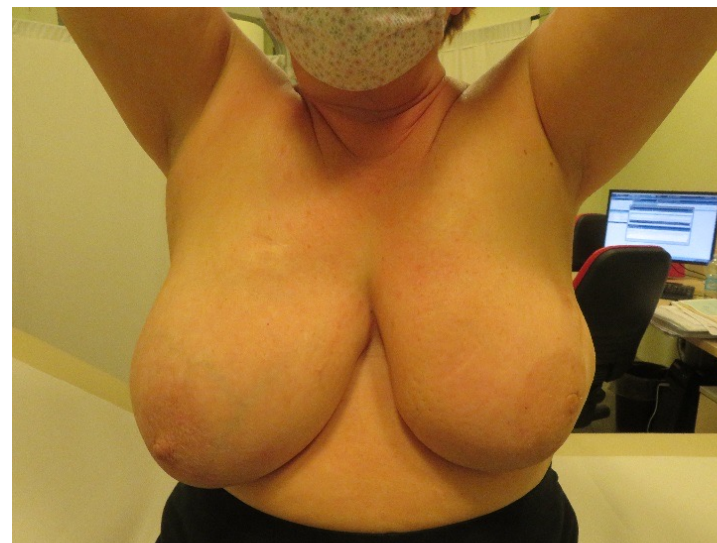


Results: toxicity

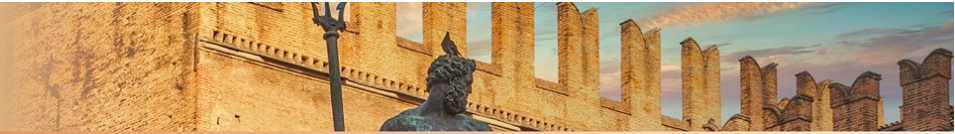
WB + SIB + SVC LN 3DCRT



End of RT: G1 erythema + G2 dysphagia

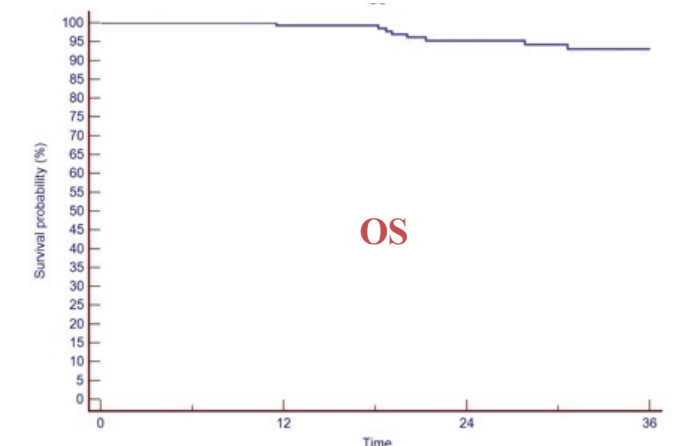
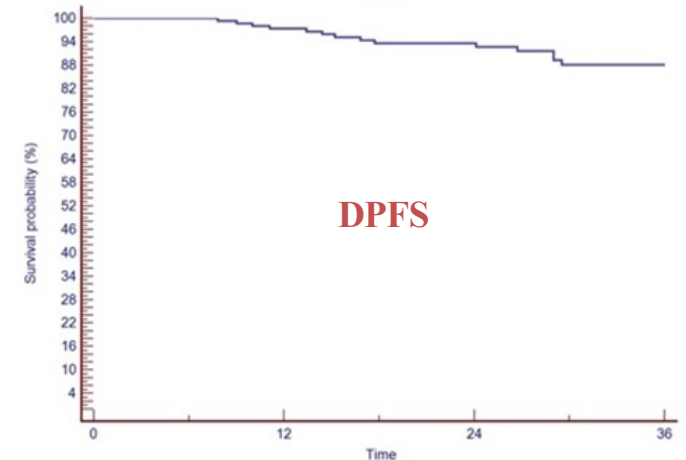


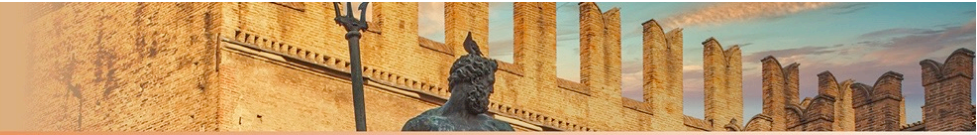
6 months after RT: G0



Results: outcomes

Local progression	1 pt (metastatic at diagnosis and treated with radical WBRT+LN)
Local control	99.4%
Distant progression	14 pts
DPFS	90.8%
OS	92.8%
Death	11 pts (9 for systemic progression, 2 for other causes)





Conclusions

Locoregional HRT +/- SIB is feasible with low acute and late toxicity without significant differences in toxicities between the different RT techniques. Pts with SIB prescription who registered slightly higher toxicity, were treated with Tomotherapy.



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Grazie per l'attenzione