


XXXII CONGRESSO NAZIONALE AIRO
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XII CONGRESSO NAZIONALE AIRO GIOVANI

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

 Associazione
Italiana
Radioterapia
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Partial breast re-irradiation using external beam radiotherapy for local recurrence after previous whole breast radiotherapy: experience of European Institute of Oncology

Dott.ssa Simona Arculeo – Dott.ssa Maria Alessia Zerella





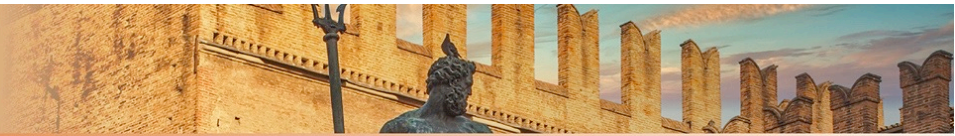
DICHIARAZIONE

Relatore: Dott.ssa Maria Alessia Zerella

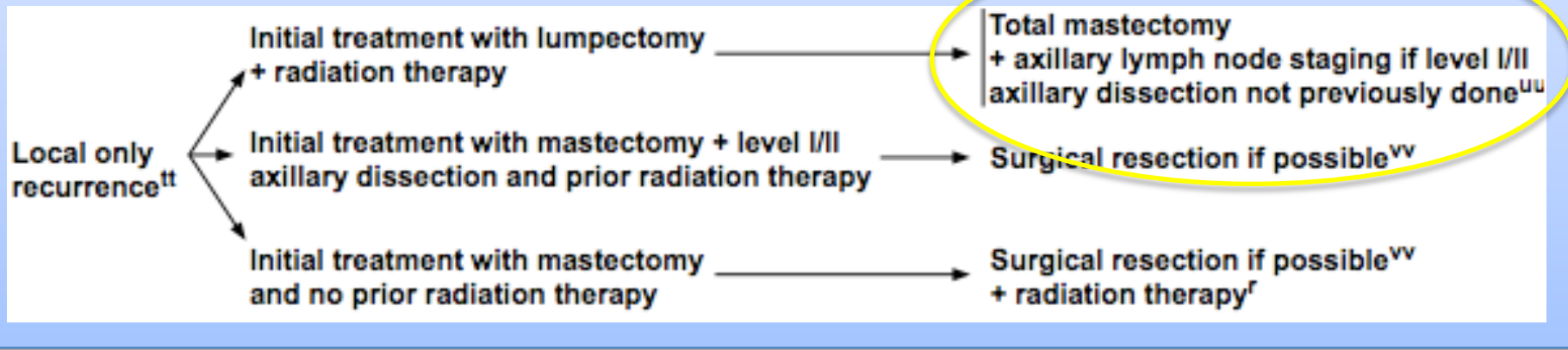
Come da nuova regolamentazione della Commissione Nazionale per la Formazione Continua del Ministero della Salute, è richiesta la trasparenza delle fonti di finanziamento e dei rapporti con soggetti portatori di interessi commerciali in campo sanitario.

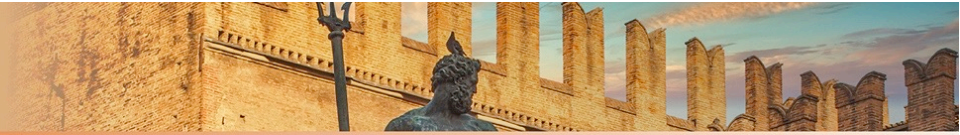
- Posizione di dipendente in aziende con interessi commerciali in campo sanitario **(NIENTE DA DICHIARARE)**
- Consulenza ad aziende con interessi commerciali in campo sanitario **(NIENTE DA DICHIARARE)**
- Fondi per la ricerca da aziende con interessi commerciali in campo sanitario **(NIENTE DA DICHIARARE)**
- 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





BACKGROUND

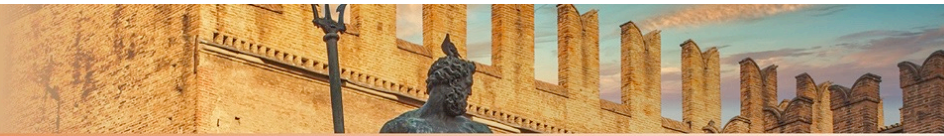




ELIGIBILITY CRITERIA

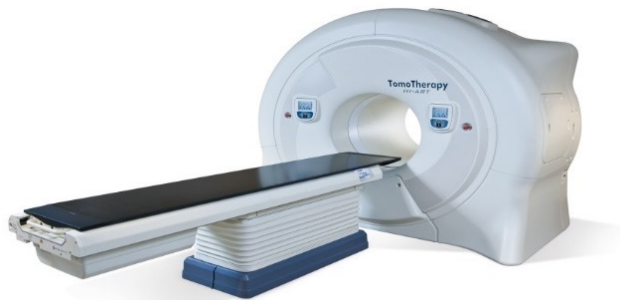
- Locoregional tumor recurrence after WBRT ($pT \leq 2$; $pN \leq 1$)
- Unifocal disease
- Patient preference
- Second breast conservation is technically feasible





RADIOTHERAPY TECHNIQUES

- BrainLab VERO: step-and-shoot IMRT

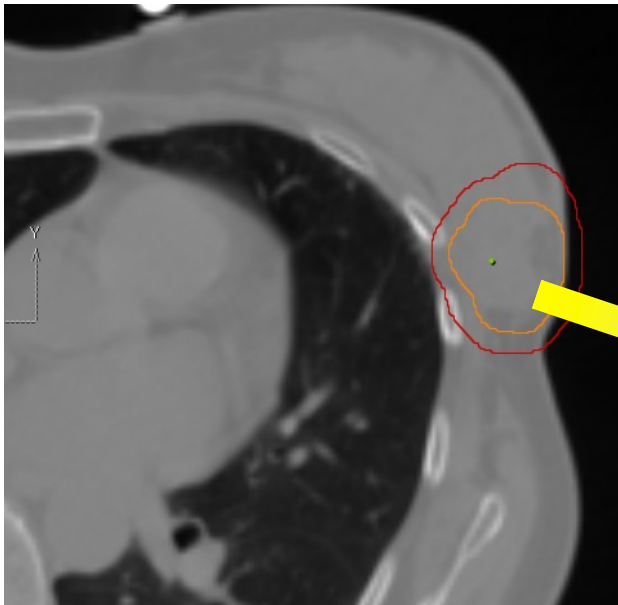


- Tomotherapy: IMRT modality





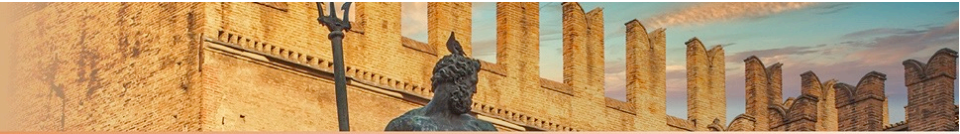
TREATMENT TECHNIQUE



- Dose delivered: 37.05 Gy in 13 fractions (2.85 Gy/fr)
- Planning objectives: PTV: V100% \geq 95%, V95% \geq 98%,

CTV \rightarrow PTV 5 mm





RESULTS

- Between **6/2012** and **5/2018**
- Number of patients: **59**
- Median age at recurrence: **60.3 y**
- Time between primary tumor and IBR, median: **69 months**
- Treated with VERO: **43**
- Treated with TomoTherapy: **16**





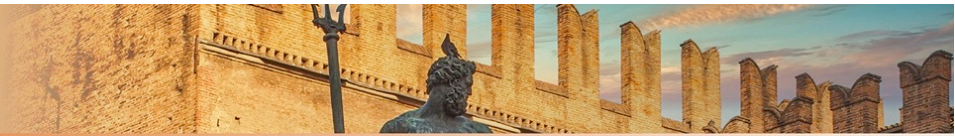
WHERE IS RECURRENCE?

Patients has recurrence in the SAME quadrant: 52.5%

Patients has recurrence in DIFFERENT quadrant: 33.9%

Missing primary tumor quadrant: 13.6%





ACUTE TOXICITY

GRADE	ERYTHEMA	EPITHELIOLISIS	EDEMA
0	52.1%	98%	91.7%
1	47.9%	2%	0
2	0	0	8.3%

INTENSITY	PAIN	ITCH	BURNING
0	89.5%	89.5%	93.8%
1-3	6.3%	10.5%	6.2%
4-7	4.2%	0	0
8-10	0	0	0



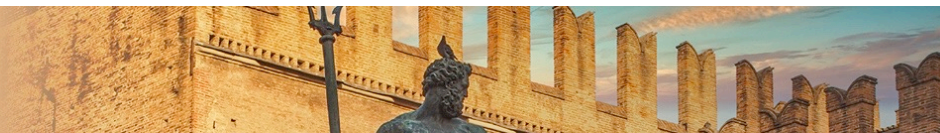
LATE TOXICITY

Data available for 30 patients
 6 months

Erythema	G0	24 (80.0)
	G1	6 (20.0)
	G2	0 (0.0)
Edema	G0	26 (86.7)
	G1	1 (3.3)
	G2	3 (10.0)
Epytheliolisis	G0	27 (90.0)
	G1	3 (10.0)
	G2	0 (0.0)
Any acute toxicity	G0	18 (60.0)
	G1	9 (30.0)
	G2	3 (10.0)

Data available for 44 patients
 Median FUP 38.7 months (1.5-80.5)

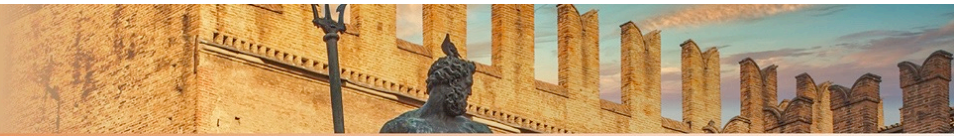
Fibrosis	G0	7
	G1	20
	G2	15
	G3	2
Telangiectasia	G0	38
	G1	4
	G2	2
Hyper/Hypopigmentation	G0	32
	G1	11
	G2	1
Atrophy	G0	33
	G1	8
	G2	3
Pain	G0	38
	G1	6
Retraction	G0	19
	G1	10
	G2	11
	G3	3
	G4	1



Side effect	Data IEO	Letterature (EBRT)
Fibrosis (G2-G3)	38.9%	60% (G2-G3)
Dyschromia	38.9%	23-37.5%
Telangiectasia	22.2%	50%
Pain	16.7%	12.5%

- Harkenrider 2011
- Deutsch 2002





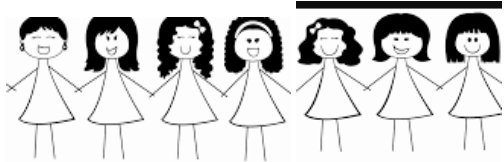
OUTCOMES

- n° pts NED = 45
- n° pts AWD = 12
- n° pts Deads = 2 (-1pt with metastasis
 -1pt with second primary tumor)

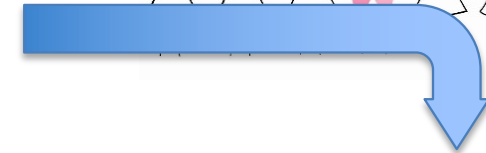


Out-field recurrence in breast	1
Locoregional	2
Metastasis	7
Second primary tumor	4



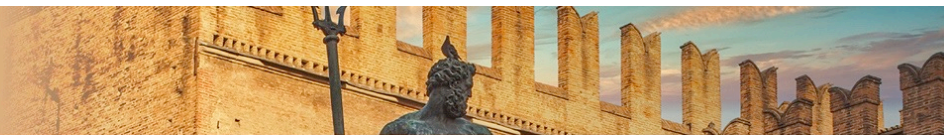


Out-field recurrence in breast	1
Locoregional	2
Metastasis	7
Second primary tumor	4



Time between primary tumor and IBR	<10 y	3/7
	>10y	4/7
Biological classification IBR	Luminal A	1/7
	Luminal B	3/7
	HER2-like	1/7
	Triple-negative	2/7
True recurrence		3/7
Elsewhere		4/7
Adjuvant therapy	HT only	3/7
	CT only	1/7
	HT+CT	2/7
	None	1/7

1 Recurrence in breast	1.69%
Time between primary tumor and IBR	> 10
Biological classification	Triple negative
Adjuvant therapy	CT
Recurrence	Elsewhere



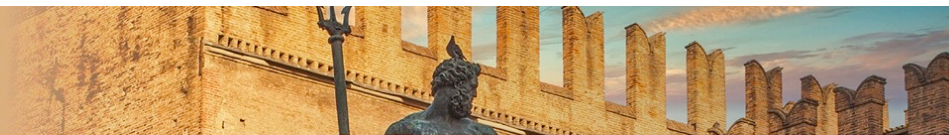
Authors	N° pts	Technique	Dose	FU	2°LR
Hannoun - Levi 2011 (abstract)	42	BRT HDR	34 Gy BID	21	5%
Chada 2008	15	BRT LDR	First 6-30 Gy Last 9-45 Gy	36	6.7%
Niehoff 2005	32	15 BRT HDR 17 BRT PDR (4 +ERT)	Med. 28 Gy Mean 30 Gy (24-40 Gy e ⁻)	19	37.5% (R0-2)
Harkenrider 2011	8	Fotoni	Med 46.7 Gy (+BRT boost in 1 pz)	30	12.5%



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Women with local recurrences have increased risk of distant metastases





CONCLUSION

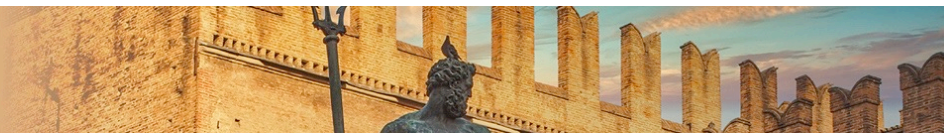
- Second breast conservative therapy represents a feasible alternative to mastectomy
- This treatment is well tolerated
- Longer follow-up is needed



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Thank
you

