

XXXII CONGRESSO NAZIONALE AIRO
XXXIII CONGRESSO NAZIONALE AIRB
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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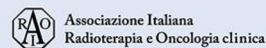
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Fast-Forward regime: our experience in terms of acute and early-late skin toxicity.

Frazionamento secondo il Trial Fast Forward: esperienza clinica in termini di tossicità cutanea acuta e sub-acuta.

N. Luca, G. Rinaldi, M. Gabbani M., Muraro, G. Napoli, U. Tebano, D. Grigolato, M. Coeli, G. Mon, F. Fiorica.

U.O.C. Radioterapia Oncologica e Medicina Nucleare Mater Salutis ULSS-9 Scaligera





DICHIARAZIONE

Relatore: NICOLETTA LUCA

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.

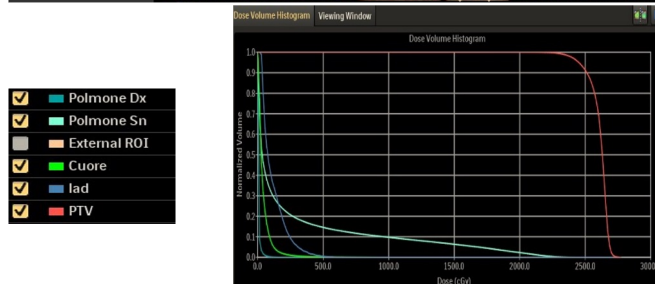
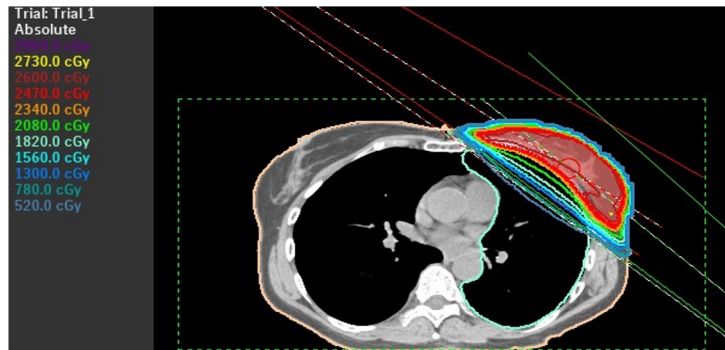
- Posizione di dipendente in aziende con interessi commerciali in campo sanitario (NIENTE DA DICHIARARE)
- Consulenza ad aziende con interessi commerciali in campo sanitario (NIENTE DA DICHIARARE)
- Fondi per la ricerca da aziende con interessi commerciali in campo sanitario (NIENTE DA DICHIARARE)
-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

FIERCE TRIAL

Età media	73 (range 65-86)
mammella destra	12
mammella sinistra	21
Tecnica VMAT	22
Tecnica IMRT	11
Chemioterapia	0
pT1a	9
pT1b	13
pT1c	11
pN0	32
pN1	1
G1	16
G2	16
G3	1
Fototipo 1	3
Fototipo 2	15
Fototipo 3	7
Fototipo 4	3
Fototipo 5	1
Fototipo 6	0

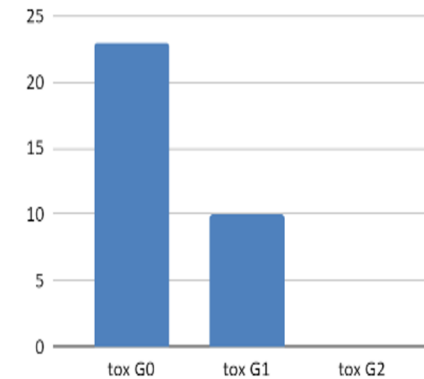
Hypofractionated breast radiotherapy for 1 week versus 3 weeks (FAST-Forward): 5-year efficacy and late normal tissue effects results from a multicentre, non-inferiority, randomised, phase 3 trial

DOSE PTV :26 Gy/5 fr (520cGy/fr)



<input checked="" type="checkbox"/>	Polmone Dx
<input checked="" type="checkbox"/>	Polmone Sn
<input type="checkbox"/>	External ROI
<input checked="" type="checkbox"/>	Cuore
<input checked="" type="checkbox"/>	Iad
<input checked="" type="checkbox"/>	PTV

SCALA RTOG TOSSICITÀ CUTANEA ACUTA



tox G0	23
tox G1	10
tox G2	0

Most patients did not clinically show signs of skin toxicity, according to a *qualitative* evaluation.

Grade	Observation
0	No change over baseline
1	Follicular, faint or dull erythema/epilation/dry desquamation/decreased sweating
2	Tender or bright erythema, patchy moist desquamation/moderate edema
3	Confluent moist desquamation other than skin folds, pitting edema
4	Ulceration, hemorrhage, necrosis
5	Any toxicity which causes death

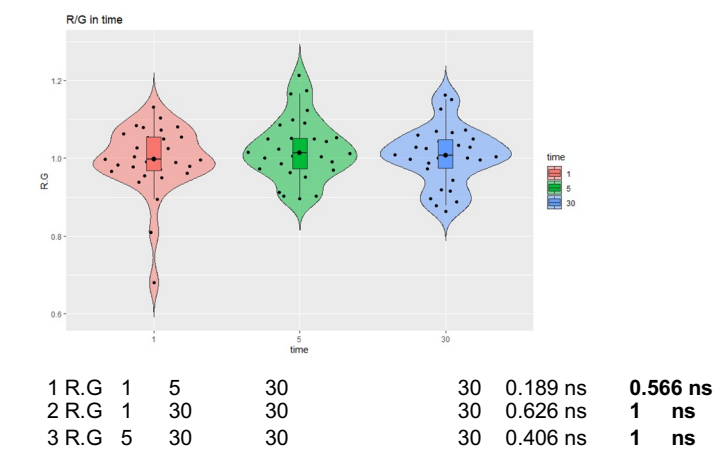
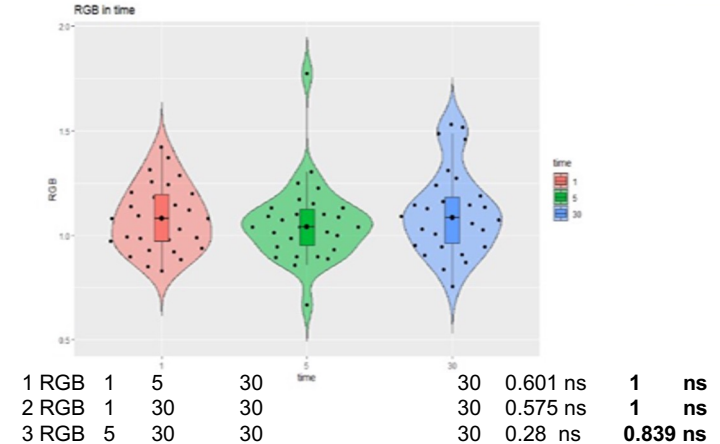


Can we make a quantitative analysis?



We have evaluated the R, G, B and RGB channel values for two parts of every patient's photos taken on days 0, 5 (end of therapy) and 30. A point was taken inside the irradiated area and one outside. By doing so, we obtained a ratio that can minimize the differences in photo acquisition.

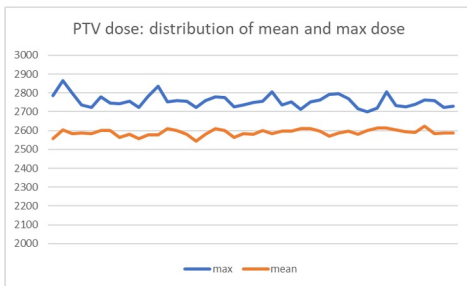
#pz	t	PTV				FONDO				PTV/FONDO			
		Area	Mean	Min	Max	Area	Mean	Min	Max	t	PTV/FONDO	R/G	
00z	RGB ptv	30546	117.2213	101	147	RGB out	29	1064	156.773	193	1945	RGB ptv/out	0.631
	R ptv	28034	120.672	145	128	R out	4	2804	227.488	217	235	R ptv/out	0.750
	G ptv	30546	104.1473	78	136	G out	8	3264	173.744	153	183	G ptv/out	0.602
	B ptv	35328	94.8026	67	120	B out	8	3532	143.492	125	157	B ptv/out	0.648
10z	RGB ptv	2138	147.867	121	157	RGB out	2338	135.245	122	145	1	RGB ptv/out	1.093
	R ptv	2338	172.763	158	203	R out	2338	166.271	151	178		R ptv/out	1.027
	G ptv	2138	137.177	108	150	G out	2822	123.868	107	141		G ptv/out	1.381
	B ptv	2208	132.215	104	157	B out	2208	111.111	97	124		B ptv/out	1.160
30z	RGB ptv	2108	141.875	101	152	RGB out	2108	114.975	101	123	5	RGB ptv/out	1.000
	R ptv	1804	149.476	147	151	R out	1804	187.255	185	198		R ptv/out	0.795
	G ptv	2036	120.805	108	132	G out	2801	134.807	120	153		G ptv/out	1.381
	B ptv	2036	110.19	107	134	B out	2804	115.872	94	132		B ptv/out	1.209
30z	RGB ptv	2108	170.862	184	192	RGB out	2108	152.802	141	173	30	RGB ptv/out	1.127
	R ptv	3374	201.111	183	216	R out	3374	193.542	173	208		R ptv/out	1.061
	G ptv	2036	129.848	185	132	G out	2835	151.431	134	188		G ptv/out	1.172
	B ptv	2828	160.563	167	192	B out	2828	135.865	105	154		B ptv/out	1.329



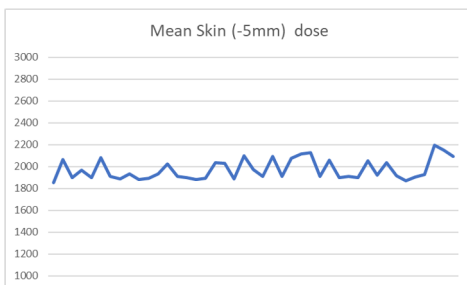


With this methodology, using the ratio between RGB parameters and R/G, we have demonstrated that there is NOT quantitative skin toxicity.

We then evaluated dosimetric parameters (PTV mean dose, PTV max dose, skin mean dose).

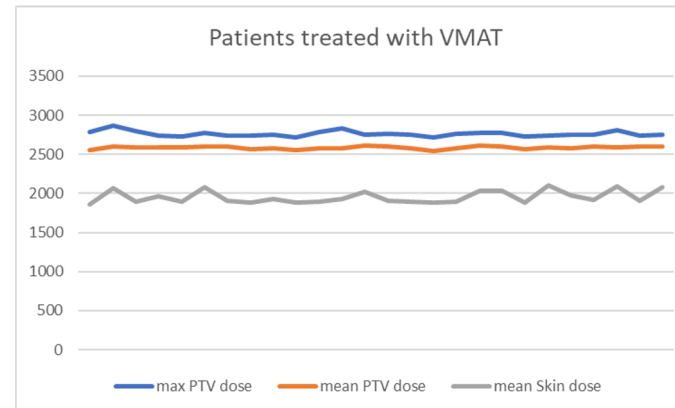
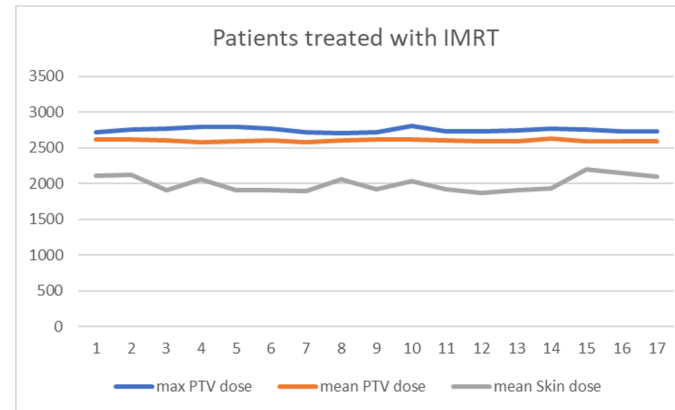


No statistical difference in mean and max dose distribution



No statistical difference in mean skin dose

Finally, we have evaluated if there were dosimetric differences between the two used irradiation techniques, IMRT and VMAT.

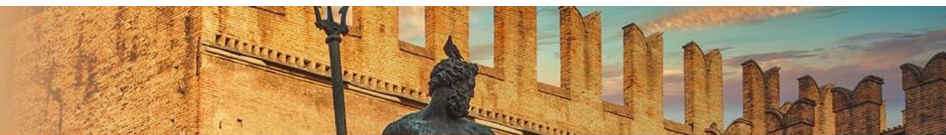


There is not difference in IMRT vs VMAT treatments

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*Grazie per
l'attenzione*



REGIONE DEL VENETO



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