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Studio di fase II di irradiazione della mammella con schema di ipofrazionamento e impiego di tecnica VMAT-SIB: valutazione della tossicità e primi risultati clinici in 300 pazienti

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Introduzione

The UK Standardisation of Breast Radiotherapy (START) trials of radiotherapy hypofractionation for treatment of early breast cancer: 10-year follow-up results of two randomised controlled trials

Joanne S Haviland, J Roger Owen, John A Dewar, Rajiv K Agrawal, Jane Barrett, Peter J Barrett-Lee, H Jane Dobbs, Penelope Hopwood, Pat A Lawton, Brian J Magee, Judith Mills, Sandra Simmons, Mark A Sydenham, Karen Venables, Judith M Bliss, John R Yarnold*, on behalf of the START Trialists' Group†*

- Studi di Fase III randomizzati confermano la non-inferiorità del regime ipofrazionato in termini di IBR a 5-10 anni

Choosing Wisely
2013

ASTRO releases list of five radiation oncology treatments to question as part of national Choosing Wisely® campaign

- **Don't initiate whole breast radiotherapy as a part of breast conservation therapy in women age ≥50 with early stage invasive breast cancer without considering shorter treatment schedules.**

  Whole breast radiotherapy decreases local recurrence and improves survival of women with invasive breast cancer treated with breast conservation therapy. Most studies have utilized "conventionally fractionated" schedules that deliver therapy over 5-6 weeks, often followed by 1-2 weeks of boost therapy. Recent studies, however, have demonstrated equivalent tumor control and cosmetic outcome in specific patient populations with shorter courses of therapy (approximately 4 weeks). Patients and their physicians should review these options to determine the most appropriate course of therapy.

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Questioni aperte

Review

Accelerated hypofractionated breast radiotherapy: FAQs (Frequently Asked Questions) and facts☆

Angel Montero*, Xavier Sanz, Raul Hernanz, Dolores Cabrera, M
Eloisa Bayo, Ferran Moreno, Manel Algara

Radiation Oncology Department, University Hospital Ramon y Cajal, Madrid, Spain

- DCIS
- Boost sequenziale o concomitante
- Pazienti giovani
- CT adiuvante
- Pazienti con macromastia

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Obiettivo dello studio

- Valutare tossicità, cosmesi e risultati clinici relativi all'impiego di un trattamento radiante ipofrazionato con tecnica volumetrica a modulazione d'intensità (VMAT) e sovradosaggio concomitante sul letto operatorio

Scorsetti *et al. Radiation Oncology* 2012, 7:145
http://www.ro-journal.com/content/7/1/145

RADIATION ONCOLOGY

STUDY PROTOCOL Open Access

Phase I-II study of hypofractionated simultaneous integrated boost using volumetric modulated arc therapy for adjuvant radiation therapy in breast cancer patients: a report of feasibility and early toxicity results in the first 50 treatments

Marta Scorsetti[1], Filippo Alongi[1*], Antonella Fogliata[2], Sara Pentimalli[1], Pierina Navarria[1], Francesca Lobefalo[1], Carlos Garcia-Etienne[3], Alessandro Clivio[2], Luca Cozzi[2], Pietro Mancosu[1], Giorgia Nicolini[2], Eugenio Vanetti[2], Marco Eboli[3], Carlo Rossetti[3], Arianna Rubino[3], Andrea Sagona[3], Stefano Arcangeli[1], Wolfgang Gatzemeier[3], Giovanna Masci[4], Rosalba Torrisi[4], Alberto Testori[5], Marco Alloisio[5], Armando Santoro[4] and Corrado Tinterri[3]

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Criteri di inclusione

- Età >18 anni
- Conferma istopatologica di Ca. invasivo o in situ
- Stadio I - II (T <3 cm and N ≤ 3)
- Intervento chirurgico di tipo conservativo
- Non limiti relativi alla esecuzione di CT adiuvante

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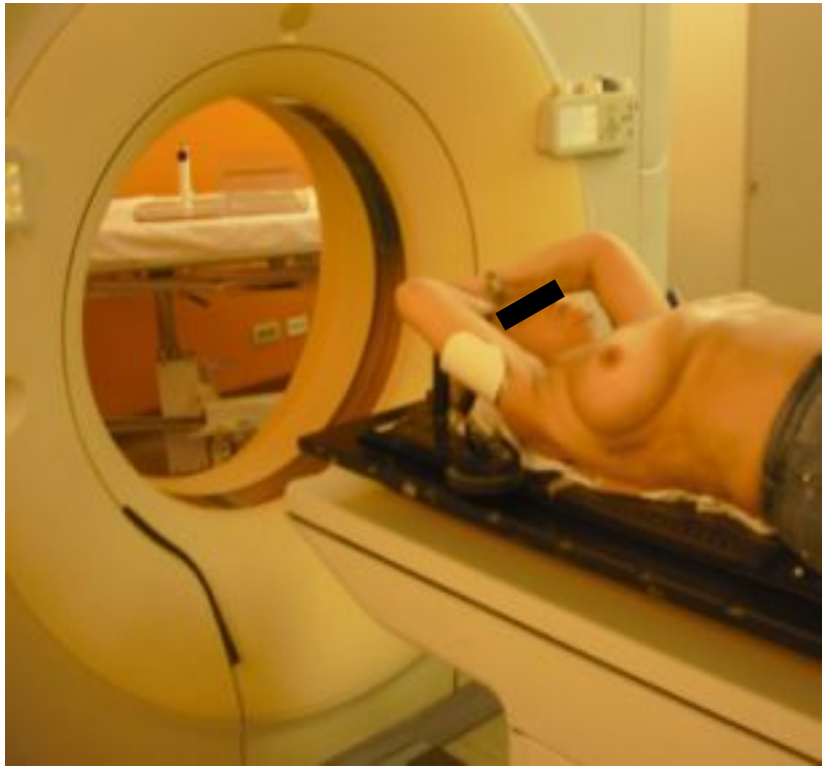
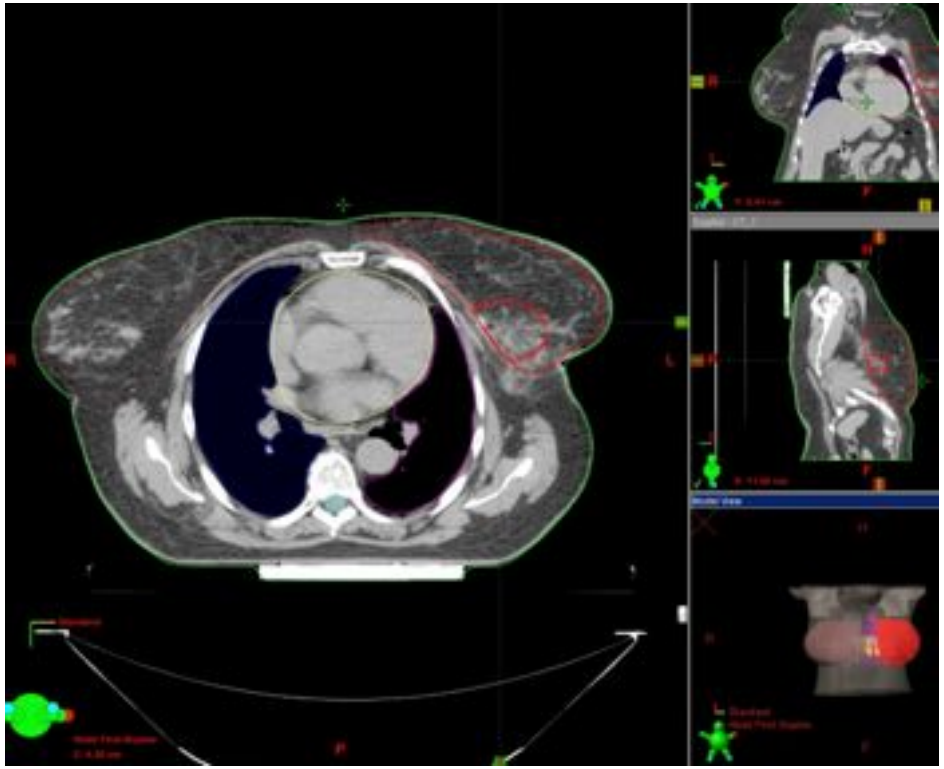
Materiali e Metodi

Fase di Simulazione e Contouring





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Materiali e Metodi

Fase di Planning

- WBI: 40,5 Gy
- SIB: 48 Gy

15 sedute con tecnica VMAT

Dose constraints

- Cuore

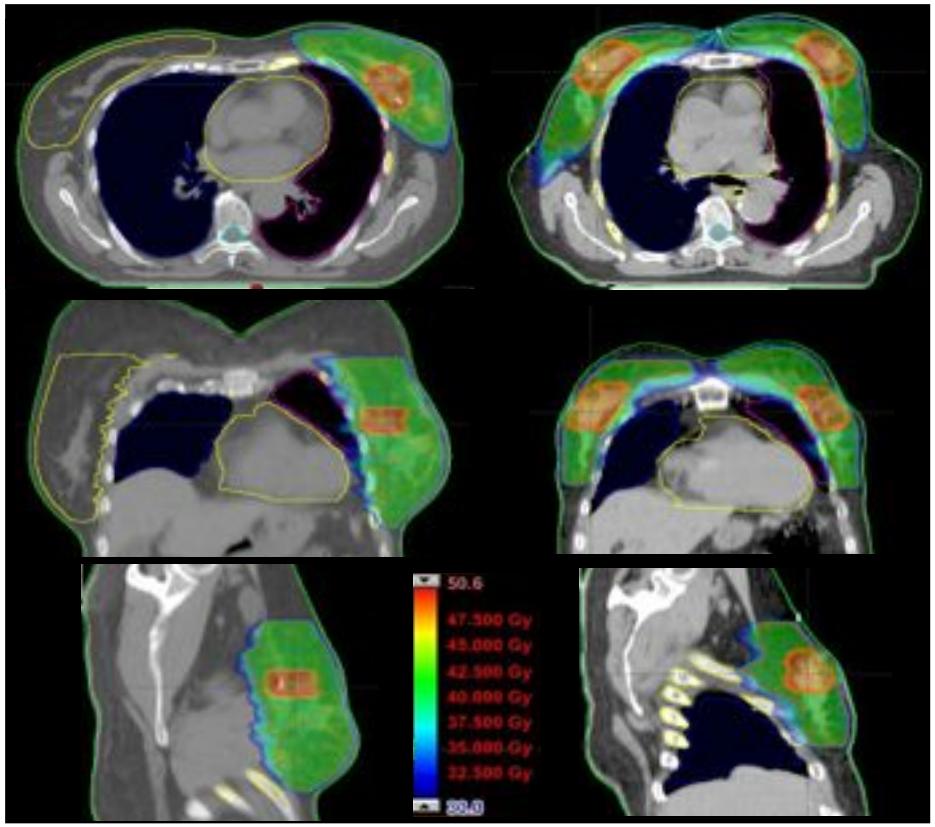
  D mean < 4 Gy; V18 < 5%

- Polmone omo

  V20 < 10%; D mean < 10 Gy

- Mammella contro

  D mean ≤ 3 Gy



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Risultati

Caratteristiche delle pazienti

Agosto 2010 - Dicembre 2013: **300** pazienti (305 trattamenti)
Follow up mediano: **18** mesi (range 10-45)
> 2 anni di follow up: 92 pazienti

Age (years)	Median Range	61 27 - 88
pT	pTis pT1mic pT1a pT1b pT1c pT2	2 (0.7%) 7 (2.2%) 13 (4.4%) 84 (27.9%) 152 (50.7%) 42 (14%)
pN	pN0 pN1	252 (84%) 48 (16%)
Disease Stage	I II	222 (74%) 78 (26%)
Histology	IDC ILC Other Invasive DCIS	246 (82%) 37 (12.4%) 15 (5.25%) 2 (0.75%)

Grading	I II III	36 (12%) 213 (71%) 51 (17%)
ER	Positive Negative	279 (93%) 21 (7%)
PgR	Positive Negative	234 (78%) 66 (22%)
C-erb	Positive Negative	267 (89%) 33 (11%)
Ki67	≤ 20% > 20%	237 (79%) 63 (21%)

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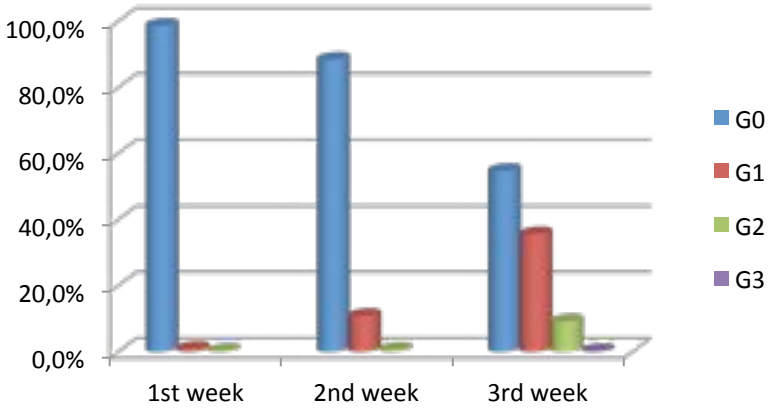
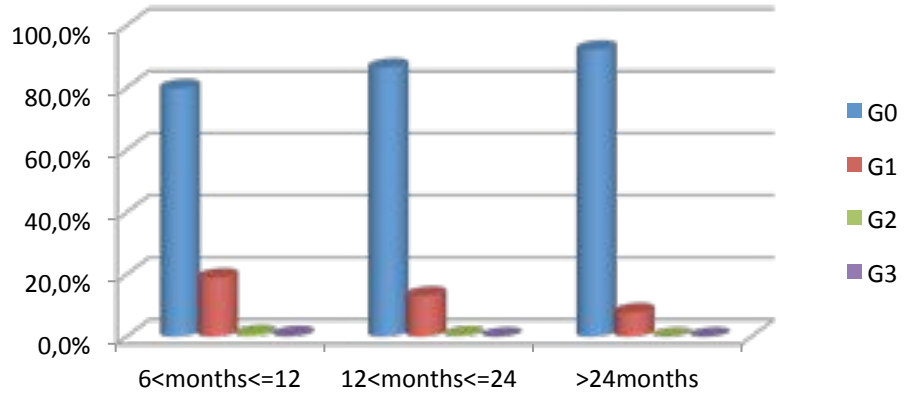
Risultati

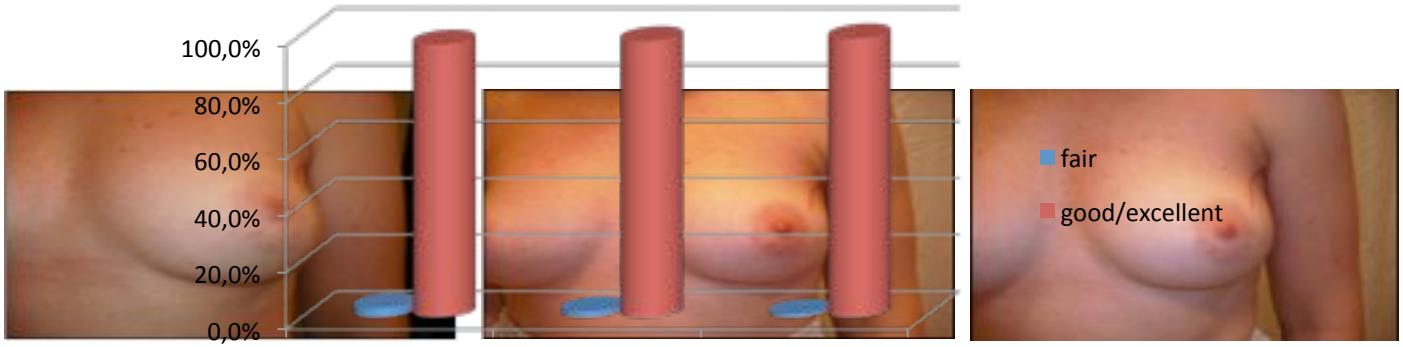
Tossicità cutanea e cosmesi



Tox acuta durante RT (RTOG score)



Tox tardiva (CTCAE v.4.0 score)



Pre RT

Termine RT

Follow up @ 90 days

Cosmesi (Harvard scale)

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Conclusioni

- **Ottima tolleranza** in termini di tossicità cutanea acuta e precoce tardiva
- **Ottimo risultato cosmetico**
- **Risultati clinici** in in linea con i dati di letteratura
- **No tossicità cardiologica o polmonare**
- Necessità di **più lungo follow up** per confermare risultati clinici e dati di tossicità tardiva