



AZIENDA OSPEDALIERA
COMPLESSO OSPEDALIERO
SAN GIOVANNI - ADDOLORATA
Ospedale di rilievo nazionale e di alta specializzazione

U.O.C. DI RADIOTERAPIA ONCOLOGICA

**La
TOMOTERAPIA
In Italia:
Esperienze a confronto**

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An aerial photograph of a city, likely Rome, showing a dense urban grid with a prominent circular stadium in the upper left. A semi-transparent grey rectangular box is centered over the image, containing the text 'SPQR' in a stylized, serif font. The text is white with a slight shadow, making it stand out against the background. The city below is a mix of green spaces, buildings, and roads, with a winding path or road cutting through the center.

SPQR

Colosseo



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UNITA' DI RADIOTERAPIA ONCOLOGICA

Superficie: 2.500 m²

- **2 LINAC**
- **TC-SIMULATORE**
- **AMBULATORI & DAY HOSPITAL**
- **BRACHITERAPIA (LDR & HDR)**
- **1 LINAC PER TOMOTERAPIA**

Circo Massimo

Terme di Caracalla

Colosseo

Circo Massimo

Terme di Caracalla









TomoTherapy
HI-ART





25.10.2010

Inizio attività con Tomoterapia

- SNC
- Testa & collo
- Prostata

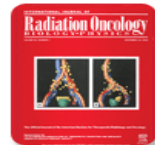




**STUDIO DI FASE II SULLA RADIOTERAPIA PARZIALE
ACCELERATA (APBI) CON TOMOTERAPIA IN DONNE
CON CARCINOMA DELLA MAMMELLA IN FASE INIZIALE**

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CONSENSUS STATEMENT

ACCELERATED PARTIAL BREAST IRRADIATION CONSENSUS STATEMENT FROM THE AMERICAN SOCIETY FOR RADIATION ONCOLOGY (ASTRO)

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GEC-ESTRO Recommendations

Patient selection for accelerated partial-breast irradiation (APBI) after breast-conserving surgery: Recommendations of the Groupe Européen de Curiethérapie-European Society for Therapeutic Radiology and Oncology (GEC-ESTRO) breast cancer working group based on clinical evidence (2009)

Csaba Polgár^{a,*}, Erik Van Limbergen^b, Richard Pötter^c, György Kovács^d, Alfredo Polo^e, Jaroslaw Lyczek^f, Guido Hildebrandt^g, Peter Niehoff^h, Jose Luis Guinotⁱ, Ferran Guedea^j, Bengt Johansson^k, Oliver J. Ott^l, Tibor Major^a, Vratislav Strnad^l, On behalf of the GEC-ESTRO breast cancer working group

Difference between ASTRO¹ and GEC/ESTRO² recommendations

	ASTRO	GEC/ESTRO
AGE (years)	≥ 60	≥ 50
STAGE	T1-T2 (≤ 3 cm)	T1 (≤ 2 cm)
ER status	POSITIVE	ANY

1. *Int. J. Radiation Oncology Biol. Phys.* 74: 987-1001, 2009

2. *Radiotherapy and Oncology* 94: 264-273, 2010

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1. *Int. J. Radiation Oncology Biol. Phys.* 74: 987-1001, 2009

2. *Radiotherapy and Oncology* 94: 264-273, 2010

1.0 - SCHEMA DELLO STUDIO

Ca invasivo della mammella pT1/2 ≤ cm³ sottoposto ad intervento conservativo



CRITERI DI ELEGGIBILITA'

- CLINICI (diagnostica per immagini)
- ISTOPATOLOGICI (e.i. definitivo)

- Età ≥ 50 anni
- Diametro tumorale ≤ 3 cm
- Margini chirurgici negativi (≥2 mm)
- Tumori unicentrici e unifocali
- Assenza di estensiva componente intraduttale (≥25% della componente invasiva)
- Assenza di LIN estesa grado II/III
- Assenza di invasione linfo-vascolare
- pN0 o pN1 con max 3 linfonodi positivi
- Assenza di linfonodi palpabili e/o positivi sopraclaveari
- Assenza di invasione extracapsulare
- Qualsiasi stato ormonale o grado istologico o stato HER 2
- Granulociti >1500 mm³ e piastrine >100.000 mm³ post-chemioterapia



APBI con TOMOTERAPIA: 38.5 Gy/10 fx (3.85 Gy)

OBIETTIVI DELLO STUDIO

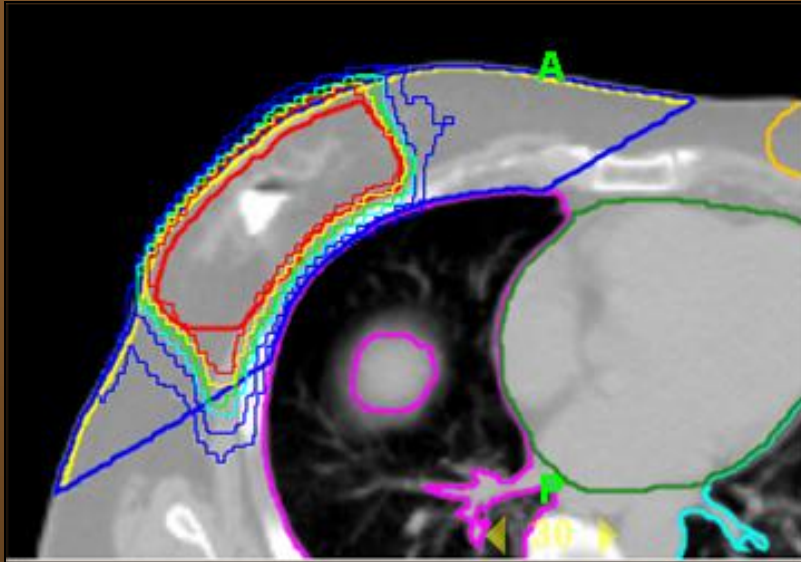
Obiettivi primari

- Controllo locale
- Tossicità acuta e cronica del trattamento

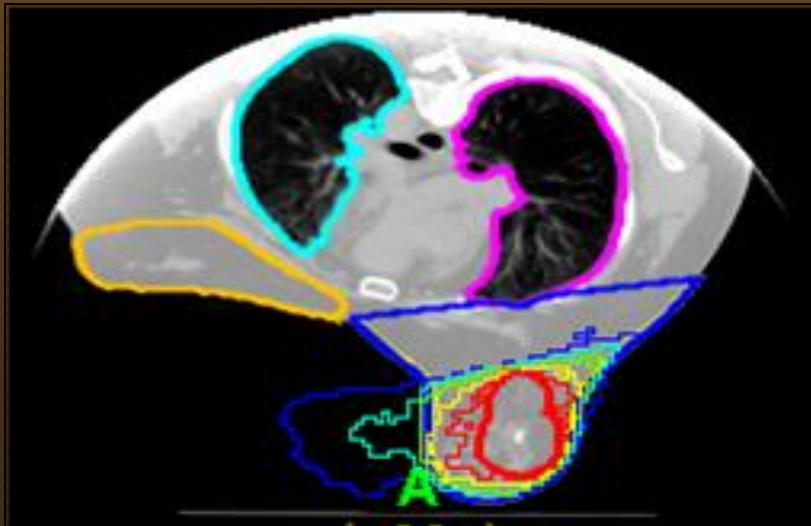
Obiettivi secondari

- Risultato cosmetico e funzionale
- Compliance (QoL; grado di partecipazione e di soddisfazione alla terapia).

Tomoterapia elicoidale



- **Ottimizzazione per minimizzare la dose al polmone, al cuore ed alla mammella ipsilaterale**



- **Pianificazione della dose sia in posizione supina che prona**



ELSEVIER



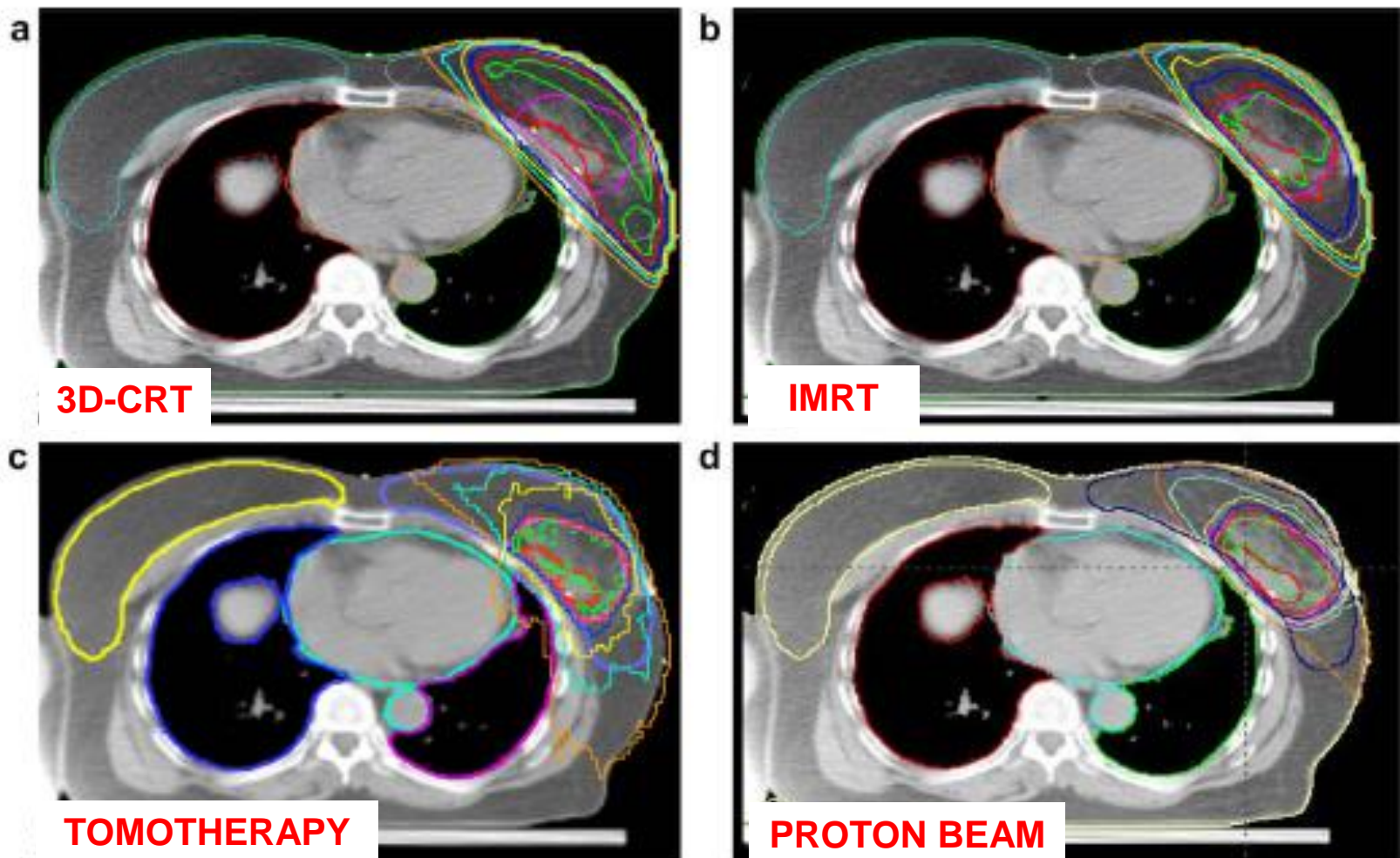
Partial breast irradiation

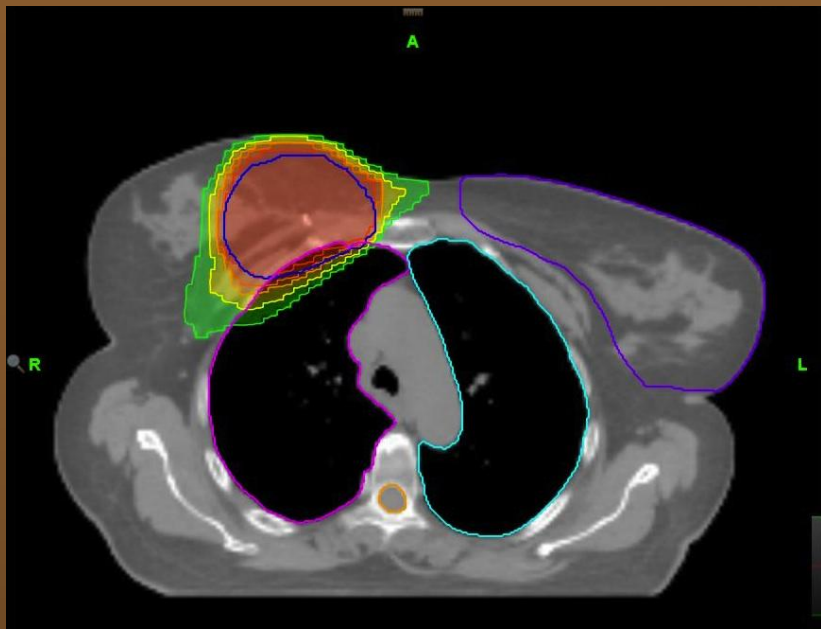
Dosimetric comparison of four different external beam partial breast irradiation techniques: Three-dimensional conformal radiotherapy, intensity-modulated radiotherapy, helical tomotherapy, and proton beam therapy

Sung Ho Moon^a, Kyung Hwan Shin^{a,b,*}, Tae Hyun Kim^a, Myonggeun Yoon^a, Soah Park^a, Doo-Hyun Lee^a, Jong Won Kim^a, Dae Woong Kim^a, Sung Yong Park^a, Kwan Ho Cho^a

^a Proton Therapy Center, National Cancer Center, Gyeonggi-do, Republic of Korea

^b Center for Breast Cancer, National Cancer Center, Gyeonggi-do, Republic of Korea





40.4 Gy

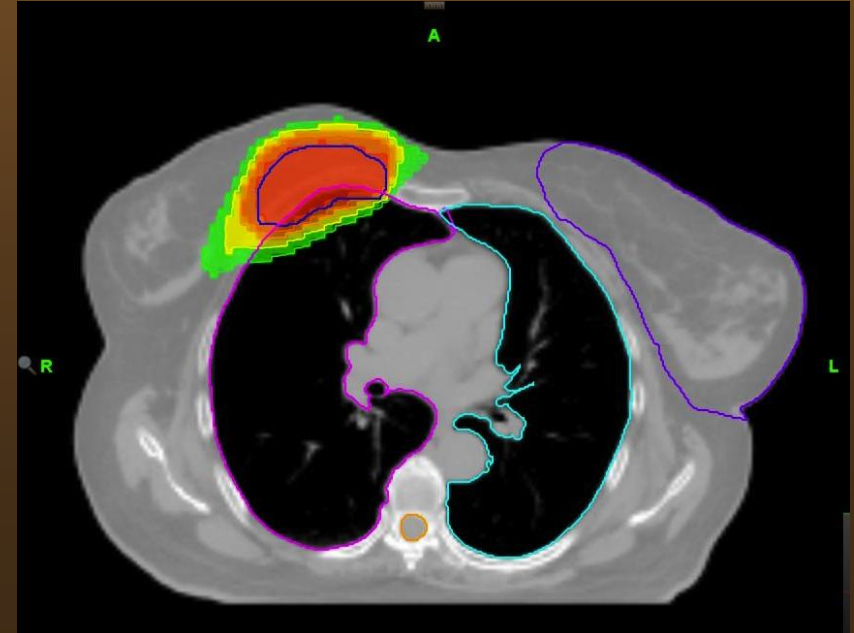
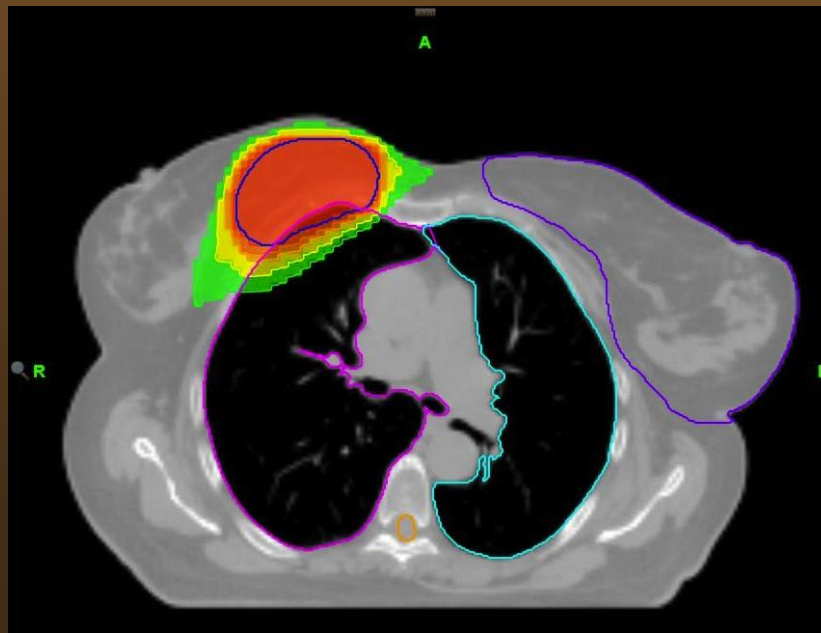
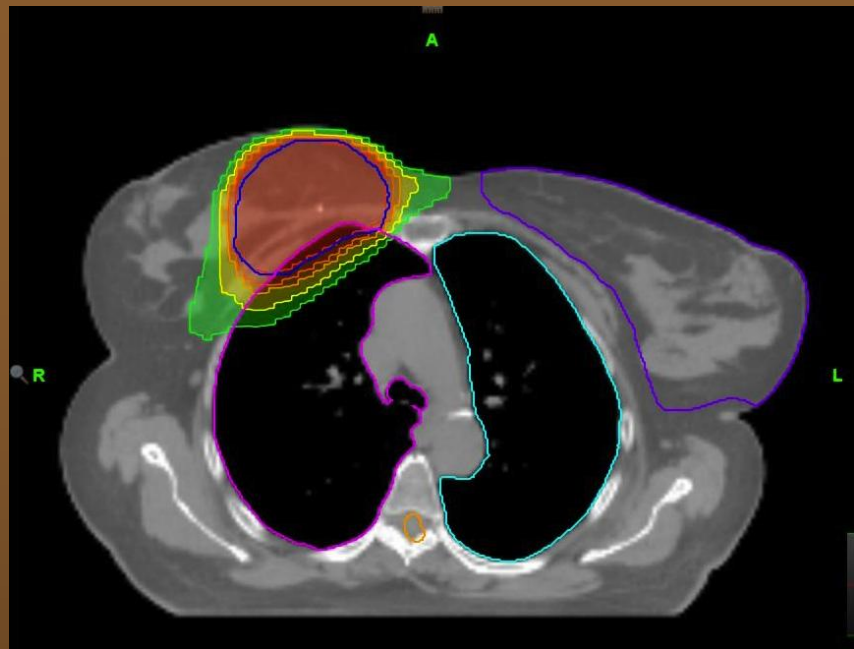
38.5 Gy

36.6 Gy

34.6 Gy

30.0 Gy

25.0 Gy



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