Radioterapia adiuvante dopo chirurgia conservativa: sempre a tutte le pazienti?

Domenico Cante

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Maria Rosa La Porta

BRITISH JOURNAL OF CANCER. Vol. IV, No. 4

THE PRINCIPLES OF TREATMENT BY RADIOTHERAPY IN BREAST CARCINOMA.

R. McWHIRTER.

From the Department of Radiotherapy, Royal Infirmary, Edinburgh.

Received for publication November 23, 1950.

In only a minority of cases is the disease still confined to the breast by the time the patient is referred to a large general hospital. The surgical results are good so long as the disease is confined to the breast, but immediately the disease extends beyond the breast the results become much poorer. Axillary spread is, of course, common and, in the past, surgical efforts have been concentrated on this route of spread. That this is not the only route of spread, however, has been clearly demonstrated by Handley and Thackray (1947), who have shown that in a high proportion of cases where there is axillary involvement there is also involvement of the glands along the internal mammary artery. Treatment of this route of spread by surgery is not at present possible. In addition the supraclavicular glands are involved in 33 per cent of the cases where the axillary glands are involved and, while surgical removal of the supraclavicular glands may be attempted, the value of this procedure is extremely doubtful. For the majority of cases of breast carcinoma it therefore follows that surgery is unlikely to be successful unless supplemented by radiotherapy.

Success in radiotherapy is dependent on the sensitivity of the tumour to radiation. Unfortunately breast carcinoma is only moderately sensitive, and improved results can only be expected if the radiotherapy is carefully planned.

It is not the purpose of this paper to give a detailed account of the treatment of a patient by radiotherapy, but rather to emphasize the main principles in the treatment of breast carcinoma by radiotherapy. There are five main principles:

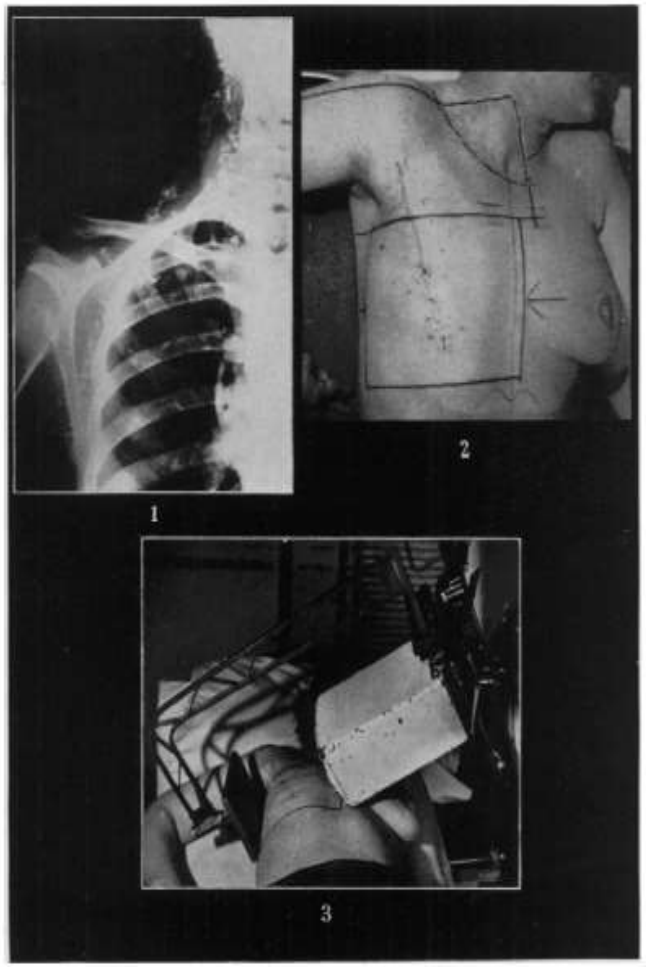
1. *The axillary and supraclavicular glands must be treated as one continuous chain.*

In the past it has been customary to regard the supraclavicular glands as being somewhat separate and distinct from the axillary glands. I believe the supraclavicular glands are best regarded as representing the proximal group of glands which accompany the axillary vessels.

If a finger is placed in the apex of the axilla at the time of a radical operation, it can be easily demonstrated that the apex in fact lies almost deep to the supraclavicular region.

In tuberculosis the disease may readily spread from the neck glands to the axillary glands, as is demonstrated in Fig. 1. This radiograph shows the two main groups of glands in the neck—the carotid chain accompanying the carotid vessels and the posterior cervical chain which lies along the anterior border of the trapezius. It will be noted that both chains are continuous with the glands of the axilla, and that the medial group of supraclavicular glands form the proximal group of the axillary chain.

Further proof of the continuity of the neck and axillary glands is shown in



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2

3

MENU BJC British Journal of Cancer

Review Article | OPEN | Published: 31 July 2018

Practice-changing radiation therapy trials for the treatment of cancer: where are we 150 years after the birth of Marie Curie?

Mareike K. Thompson, Philip Poortmans, Anthony J. Chalmers, Corinne Faivre-Finn, Emma Hall, Robert A. Huddart, Yolande Lievens, David Sebag-Montefiore & Charlotte E. Coles

British Journal of Cancer **119**, 389–407 (2018) | Download Citation

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BJC
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British Journal of Cancer **119**, 389–407 (2018) | Download Citation

-IPOFRAZIONAMENTO

-RUOLO DEL BOOST SUL LETTO TUMORALE

-IRRADIAZIONE PARZIALE DELLA MAMMELLA (PBI)

- IRRADIAZIONE LINFONODALE


LESS
IS MORE .

The Breast Journal

ORIGINAL ARTICLE

Accelerated Hypofractionated Adjuvant Whole Breast Radiotherapy with Concomitant Photon Boost after Conserving Surgery for Early Stage Breast Cancer: A Prospective Evaluation on 463 Patients

Domenico Cante MD[1], Maria Rosa La Porta MD[1], Valeria Casanova-Borca PhD[2], Piera Sciacero MD[1], Giuseppe Girelli MD[1], Massimo Pasquino PhD[2], Pierfrancesco Franco MD[3], Franca Ozzello MD[1,3]

Article first published online: 21 SEP 2011
DOI: 10.1111/j.1524-4741.2011.01159.x

Issue

The Breast Journal
Volume 17, Issue 6, pages 586–593,
November December 2011

Med Oncol (2013) 30:518
DOI 10.1007/s12032-013-0518-7

ORIGINAL PAPER

Five-year results of a prospective case series of accelerated hypofractionated whole breast radiation with concomitant boost to the surgical bed after conserving surgery for early breast cancer

Domenico Cante · Pierfrancesco Franco · Piera Sciacero · Giuseppe Girelli · Anna Maria Marra · Massimo Pasquino · Giuliana Russo · Valeria Casanova Borca · Guido Mondini · Ovidio Paino · Roberto Barmasse · Santi Tofani · Gianmauro Numico · Maria Rosa La Porta · Umberto Ricardi

Received: 22 January 2013 / Accepted: 18 February 2013

Med Oncol (2017)34:152
DOI 10.1007/s12032-017-1020-4

CrossMark

ORIGINAL PAPER

Ten-year results of accelerated hypofractionated adjuvant whole-breast radiation with concomitant boost to the lumpectomy cavity after conserving surgery for early breast cancer

Domenico Cante[1] · Edoardo Petrucci[2] · Piera Sciacero[1] · Cristina Piva[1] · Silvia Ferrario[3] · Silvia Bagnera[3] · Sebastiano Patania[3] · Guido Mondini[4] · Massimo Pasquino[2] · Valeria Casanova Borca[2] · Giorgio Vellani[5] · Maria Rosa La Porta[1] · Pierfrancesco Franco[3]

Received: 13 July 2017 / Accepted: 31 July 2017

Med Oncol (2014) 31:838
DOI 10.1007/s12032-014-0838-2

ORIGINAL PAPER

Hypofractionation and concomitant boost to deliver adjuvant whole-breast radiation in ductal carcinoma in situ (DCIS): a subgroup analysis of a prospective case series

Domenico Cante · Pierfrancesco Franco · Piera Sciacero · Giuseppe Girelli · Anna Maria Marra · Massimo Pasquino · Giuliana Russo · Valeria Casanova Borca · Guido Mondini · Ovidio Paino · Gianmauro Numico · Santi Tofani · Maria Rosa La Porta · Umberto Ricardi

TJ
ISSN 0300-8916

Tumori 2015; 00(00): 000-000
DOI: 10.5301/tj.5000402

ORIGINAL RESEARCH ARTICLE

Hypofractionated whole-breast radiotherapy and concomitant boost after breast conservation in elderly patients

Domenico Cante[1], Pierfrancesco Franco[2], Piera Sciacero[1], Giuseppe Girelli[1], Massimo Pasquino[3], Valeria Casanova Borca[3], Santi Tofani[2], Maria Rosa La Porta[1], Umberto Ricardi[2]

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J Cancer Res Clin Oncol (2013) 139:1927–1936
DOI 10.1007/s00432-013-1515-0

ORIGINAL PAPER

Intensity-modulated adjuvant whole breast radiation delivered with static angle tomotherapy (TomoDirect): a prospective case series

Pierfrancesco Franco · Michele Zeverino · Fernanda Migliaccio · Piera Sciacero · Domenico Cante · Valeria Casanova Borca · Paolo Torielli · Cecilia Arrichiello · Giuseppe Girelli · Gianmauro Numico · Maria Rosa La Porta · Santi Tofani · Umberto Ricardi

VOLUME 25 · NUMBER 22 · AUGUST 1 2007

JOURNAL OF CLINICAL ONCOLOGY

ORIGINAL REPORT

Impact of a Higher Radiation Dose on Local Control and Survival in Breast-Conserving Therapy of Early Breast Cancer: 10-Year Results of the Randomized Boost Versus No Boost EORTC 22881-10882 Trial

Harry Bartelink, Jean-Claude Horiot, Philip M. Poortmans, Henk Struikmans, Walter Van den Bogaert, Alain Fourquet, Jos J. Jager, Willem J. Hoogenraad, S. Bing Oei, Carla C. Wárlám-Rodenhuis, Marianne Pierart, and Laurence Collette

From the Department of Radiation Oncology, The Netherlands Cancer Institute, Amsterdam; Department of Radiation Oncology, Joint Center for Radiotherapy Arnhem/Nijmegen, St Radboud Hospital, Nijmegen; Department of Radiation Oncology, Radiotherapeutisch Instituut Limburg, Heerlen; Department of Radiation Oncology, Dr Bernard Verbeeten Instituut, Tilburg; Department of Radiation Oncology, University Hospital Leiden, Leiden; Department of Radiation Oncology, University Hospital Utrecht, Utrecht, the Netherlands; European Organisation for Research and Treatment of Cancer, Brussels; Department of Radiation Oncology, University Hospital Gasthuisberg, Leuven, Belgium; Department of Radiation Oncology, Institute Curie, Paris; and the Department of Radiation Oncology, Centre Georges-François Leclerc, Dijon, France.

Submitted March 1, 2007; accepted May 1, 2007; published online ahead of print at www.jco.org on June 18, 2007.

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ABSTRACT

Purpose
To investigate the long-term impact of a boost radiation dose of 16 Gy on local control, fibrosis, and overall survival for patients with stage I and II breast cancer who underwent breast-conserving therapy.

Patients and Methods
A total of 5,318 patients with microscopically complete excision followed by whole-breast irradiation of 50 Gy were randomly assigned to receive either a boost dose of 16 Gy (2,661 patients) or no boost dose (2,657 patients), with a median follow-up of 10.8 years.

Results
The median age was 55 years. Local recurrence was reported as the first treatment failure in 278 patients with no boost versus 165 patients with boost; at 10 years, the cumulative incidence of local recurrence was 10.2% versus 6.2% for the no boost and the boost group, respectively ($P < .0001$). The hazard ratio of local recurrence was 0.59 (0.46 to 0.76) in favor of the boost, with no statistically significant interaction per age group. The absolute risk reduction at 10 years per age group was the largest in patients ≤ 40 years of age: 23.9% to 13.5% ($P = .0014$). As a result, the number of salvage mastectomies has been reduced by 41%. Severe fibrosis was statistically significantly increased ($P < .0001$) in the boost group, with a 10-year rate of 4.4% versus 1.6% in the no boost group ($P < .0001$). Survival at 10 years was 82% in both arms.

Conclusion
After a median follow-up period of 10.8 years, a boost dose of 16 Gy led to improved local control in all age groups, but no difference in survival.

J Clin Oncol 25:3259-3265. © 2007 by American Society of Clinical Oncology

5318 pazienti

↙ ↘

boost no boost

FU 10 anni

Recidive locali:

No boost= 10.2%

Boost=6.2%

Fibrosi maggiore nel gruppo boost

Nessuna differenza per sopravvivenza globale

Conclusione: boost raccomandato per l'alto rischio

Partial-breast radiotherapy after breast conservation surgery for patients with early breast cancer (UK IMPORT LOW trial): 5-year results from a multicentre, randomised, controlled, phase 3, non-inferiority trial

Charlotte E Coles, Clare L Griffin, Anna M Kirby, Jenny Titley, Rajiv K Agrawal, Abdulla Alhasso, Indrani S Bhattacharya, Adrian M Brunt, Laura Ciurlionis, Charlie Chan, Ellen M Donovan, Marie A Emson, Adrian N Harnett, Joanne S Haviland, Penelope Hopwood, Monica L Jefford, Ronald Kaggwa, Elinor J Sawyer, Isabel Syndikus, Yat M Tsang, Duncan A Wheatley, Maggie Wilcox, John R Yarnold*, Judith M Bliss*, on behalf of the IMPORT Trialists†

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See Comment page 1010

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Summary

Background Local cancer relapse risk after breast conservation surgery followed by radiotherapy has fallen sharply in many countries, and is influenced by patient age and clinicopathological factors. We hypothesise that partial-breast radiotherapy restricted to the vicinity of the original tumour in women at lower than average risk of local relapse will improve the balance of beneficial versus adverse effects compared with whole-breast radiotherapy.

Methods IMPORT LOW is a multicentre, randomised, controlled, phase 3, non-inferiority trial done in 30 radiotherapy centres in the UK. Women aged 50 years or older who had undergone breast-conserving surgery for unifocal invasive ductal adenocarcinoma of grade 1–3, with a tumour size of 3 cm or less (pT1–2), none to three positive axillary nodes (pN0–1), and minimum microscopic margins of non-cancerous tissue of 2 mm or more, were recruited. Patients were randomly assigned (1:1:1) to receive 40 Gy whole-breast radiotherapy (control), 36 Gy whole-breast radiotherapy and 40 Gy to the partial breast (reduced-dose group), or 40 Gy to the partial breast only (partial-breast group) in 15 daily treatment fractions. Computer-generated random permuted blocks (mixed sizes of six and nine) were used to assign patients to groups, stratifying patients by radiotherapy treatment centre. Patients and clinicians were not masked to treatment allocation. Field-in-field intensity-modulated radiotherapy was delivered using standard tangential beams that were simply reduced in length for the partial-breast group. The primary endpoint was ipsilateral local relapse (80% power to exclude a 2·5% increase [non-inferiority margin] at 5 years for each experimental group; non-inferiority was shown if the upper limit of the two-sided 95% CI for the local relapse hazard ratio [HR] was less than 2·03), analysed by intention to treat. Safety analyses were done in all patients for whom data was available (ie, a modified intention-to-treat population). This study is registered in the ISRCTN registry, number ISRCTN12852634.

Findings Between May 3, 2007, and Oct 5, 2010, 2018 women were recruited. Two women withdrew consent for use of their data in the analysis. 674 patients were analysed in the whole-breast radiotherapy (control) group, 673 in the reduced-dose group, and 669 in the partial-breast group. Median follow-up was 72·2 months (IQR 61·7–83·2), and 5-year estimates of local relapse cumulative incidence were 1·1% (95% CI 0·5–2·3) of patients in the control group, 0·2% (0·02–1·2) in the reduced-dose group, and 0·5% (0·2–1·4) in the partial-breast group. Estimated 5-year absolute differences in local relapse compared with the control group were −0·73% (−0·99 to 0·22) for the reduced-dose and −0·38% (−0·84 to 0·90) for the partial-breast groups. Non-inferiority can be claimed for both reduced-dose and partial-breast radiotherapy, and was confirmed by the test against the critical HR being more than 2·03 (p=0·003 for the reduced-dose group and p=0·016 for the partial-breast group, compared with the whole-breast radiotherapy group). Photographic, patient, and clinical assessments recorded similar adverse effects after reduced-dose or partial-breast radiotherapy, including two patient domains achieving statistically significantly lower adverse effects (change in breast appearance [p=0·007 for partial-breast] and breast harder or firmer [p=0·002 for reduced-dose and p<0·0001 for partial-breast]) compared with whole-breast radiotherapy.

Interpretation We showed non-inferiority of partial-breast and reduced-dose radiotherapy compared with the standard whole-breast radiotherapy in terms of local relapse in a cohort of patients with early breast cancer, and equivalent or fewer late normal-tissue adverse effects were seen. This simple radiotherapy technique is implementable in radiotherapy centres worldwide.

Scopo dell'irradiazione parziale è focalizzare la RT sulla regione a più alto rischio di recidiva.

PBI (BRT, IORT, ERT).

Risultati promettenti ma non tali da cambiare la pratica clinica

IMPORT LOW: studio randomizzato di fase 3

Ha dimostrato la non inferiorità della PBI rispetto alla WBRT nel Ca mammario stadio iniziale (pT1-2 (max 3 cm) pN0-1) in termini di recidiva locale nel Ca mammario in stadio iniziale, con effetti collaterali equivalenti.

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Radiotherapy or surgery of the axilla after a positive sentinel node in breast cancer (EORTC 10981-22023 AMAROS):a randomised, multicentre, open-label, phase 3 non-inferiority trial

Summary

Background—If treatment of the axilla is indicated in patients with breast cancer who have a positive sentinel node, axillary lymph node dissection is the present standard. Although axillary lymph node dissection provides excellent regional control, it is associated with harmful side-effects. We aimed to assess whether axillary radiotherapy provides comparable regional control with fewer side-effects.

Methods—Patients with T1–2 primary breast cancer and no palpable lymphadenopathy were enrolled in the randomised, multicentre, open-label, phase 3 non-inferiority EORTC 10981-22023 AMAROS trial. Patients were randomly assigned (1:1) by a computer-generated allocation schedule to receive either axillary lymph node dissection or axillary radiotherapy in case of a positive sentinel node, stratified by institution. The primary endpoint was non-inferiority of 5-year axillary recurrence, considered to be not more than 4% for the axillary radiotherapy group compared with an expected 2% in the axillary lymph node dissection group. Analyses were by intention to treat and per protocol. The AMAROS trial is registered with ClinicalTrials.gov, number NCT00014612.

Findings—Between Feb 19, 2001, and April 29, 2010, 4823 patients were enrolled at 34 centres from nine European countries, of whom 4806 were eligible for randomisation. 2402 patients were randomly assigned to receive axillary lymph node dissection and 2404 to receive axillary radiotherapy. Of the 1425 patients with a positive sentinel node, 744 had been randomly assigned to axillary lymph node dissection and 681 to axillary radiotherapy; these patients constituted the intention-to-treat population. Median follow-up was 6·1 years (IQR 4·1–8·0) for the patients with positive sentinel lymph nodes. In the axillary lymph node dissection group, 220 (33%) of 672 patients who underwent axillary lymph node dissection had additional positive nodes. Axillary recurrence occurred in four of 744 patients in the axillary lymph node dissection group and seven of 681 in the axillary radiotherapy group. 5-year axillary recurrence was 0·43% (95% CI 0·00–0·92) after axillary lymph node dissection versus 1·19% (0·31–2·08) after axillary radiotherapy. The planned non-inferiority test was underpowered because of the low number of events. The one-sided 95% CI for the underpowered non-inferiority test on the hazard ratio was 0·00–5·27, with a non-inferiority margin of 2. Lymphoedema in the ipsilateral arm was noted significantly more often after axillary lymph node dissection than after axillary radiotherapy at 1 year, 3 years, and 5 years.

Interpretation—Axillary lymph node dissection and axillary radiotherapy after a positive sentinel node provide excellent and comparable axillary control for patients with T1–2 primary breast cancer and no palpable lymphadenopathy. Axillary radiotherapy results in significantly less morbidity.

Funding—EORTC Charitable Trust.

AMAROS: studio randomizzato di fase 3

Dissezione ascellare o radioterapia sui linfonodi ascellari nei pazienti con linfonodo sentinella positivo.

Risultati: tassi di linfedema più bassi nel braccio RT con percentuale di controllo loco-regionale sovrapponibile nei tumori mammari in stadio iniziale T1-2 con adenopatie ascellari non palpabili.

The Breast 34 (2017) 591–594

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The Breast

journal homepage: www.elsevier.com/brst

Tailoring radiotherapy according to cancer subtypes

Roberto Orecchia*

University of Milan, European Institute of Oncology, Milan, Italy

E' giunto il momento di rendere la radioterapia più adattabile alla biologia del tumore, personalizzando i trattamenti in base ad una stratificazione del rischio più accurata che tiene conto dei diversi sottotipi molecolari e delle informazioni genetiche del paziente, così da identificare categorie che potrebbero beneficiare di un'intensificazione o deintensificazione della dose……..

o addirittura dell'omissione dell'irradiazione.

Studio Danese DBCG

Differenza della recidiva locale in base ai fenotipi molecolari.

LUMINAL A= 8%

LUMINAL B= 14%

HER 2+= 17%

TRIPLO –= 19%

DCIS G1 ER/PgR+ NO RT

… sempre a tutte le pazienti?

Breast-conserving surgery with or without irradiation in women aged 65 years or older with early breast cancer (PRIME II): a randomised controlled trial

Ian H Kunkler, Linda J Williams, Wilma J L Jack, David A Cameron, J Michael Dixon, on behalf of the PRIME II investigators

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Edinburgh Cancer Research Centre (Prof I H Kunkler FRCR, Prof D A Cameron MD, Prof J M Dixon MD) and Centre for Population Health Sciences, University of Edinburgh, Edinburgh, UK (L J Williams PhD); and Edinburgh Cancer Centre, Western General Hospital, Edinburgh, UK (W J L Jack MBChB)
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Summary

Background For most older women with early breast cancer, standard treatment after breast-conserving surgery is adjuvant whole-breast radiotherapy and adjuvant endocrine treatment. We aimed to assess the effect omission of whole-breast radiotherapy would have on local control in older women at low risk of local recurrence at 5 years.

Methods Between April 16, 2003, and Dec 22, 2009, 1326 women aged 65 years or older with early breast cancer judged low-risk (ie, hormone receptor-positive, axillary node-negative, T1–T2 up to 3 cm at the longest dimension, and clear margins; grade 3 tumour histology or lymphovascular invasion, but not both, were permitted), who had had breast-conserving surgery and were receiving adjuvant endocrine treatment, were recruited into a phase 3 randomised controlled trial at 76 centres in four countries. Eligible patients were randomly assigned to either whole-breast radiotherapy (40–50 Gy in 15–25 fractions) or no radiotherapy by computer-generated permuted block randomisation, stratified by centre, with a block size of four. The primary endpoint was ipsilateral breast tumour recurrence. Follow-up continues and will end at the 10-year anniversary of the last randomised patient. Analyses were done by intention to treat. The trial is registered on ISRCTN.com, number ISRCTN95889329.

Findings 658 women who had undergone breast-conserving surgery and who were receiving adjuvant endocrine treatment were randomly assigned to receive whole-breast irradiation and 668 were allocated to no further treatment. After median follow-up of 5 years (IQR 3·84–6·05), ipsilateral breast tumour recurrence was 1·3% (95% CI 0·2–2·3; n=5) in women assigned to whole-breast radiotherapy and 4·1% (2·4–5·7; n=26) in those assigned no radiotherapy (p=0·0002). Compared with women allocated to whole-breast radiotherapy, the univariate hazard ratio for ipsilateral breast tumour recurrence in women assigned to no radiotherapy was 5·19 (95% CI 1·99–13·52; p=0·0007). No differences in regional recurrence, distant metastases, contralateral breast cancers, or new breast cancers were noted between groups. 5-year overall survival was 93·9% (95% CI 91·8–96·0) in both groups (p=0·34). 89 women died; eight of 49 patients allocated to no radiotherapy and four of 40 assigned to radiotherapy died from breast cancer.

Interpretation Postoperative whole-breast radiotherapy after breast-conserving surgery and adjuvant endocrine treatment resulted in a significant but modest reduction in local recurrence for women aged 65 years or older with early breast cancer 5 years after randomisation. However, the 5-year rate of ipsilateral breast tumour recurrence is probably low enough for omission of radiotherapy to be considered for some patients.

Funding Chief Scientist Office (Scottish Government), Breast Cancer Institute (Western General Hospital, Edinburgh).

Trial fase 3 prospettico randomizzato:

1326 pazienti > 65 anni

T1-2 (fino a 3 cm)

OT

↙ ↘

SI RT (658) NO RT (668)

End point: recidiva locale

FU 5 anni:

SI RT= 1%

NO RT=4%

Nessuna differenza per recidiva regionale, metastasi a distanza, carcinoma mammario controlaterale né nuovi tumori.

Conclusioni: la recidiva locale in questo setting di pazienti è molto bassa tanto da prendere in considerazione l'omissione della radioterapia per alcuni pazienti.

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JOURNAL OF CLINICAL ONCOLOGY

ORIGINAL REPORT

Lumpectomy Plus Tamoxifen With or Without Irradiation in Women Age 70 Years or Older With Early Breast Cancer: Long-Term Follow-Up of CALGB 9343

Kevin S. Hughes, Lauren A. Schnaper, Jennifer R. Bellon, Constance T. Cirrincione, Donald A. Berry, Beryl McCormick, Hyman B. Muss, Barbara L. Smith, Clifford A. Hudis, Eric P. Winer, and William C. Wood

See accompanying editorial on page 2367 and article on page 2377

Kevin S. Hughes and Barbara L. Smith, Massachusetts General Hospital; Jennifer R. Bellon and Eric P. Winer, Dana-Farber Cancer Institute, Boston, MA; Lauren A. Schnaper, Greater Baltimore Medical Center, Baltimore, MD; Constance T. Cirrincione, Alliance/Cancer and Leukemia Group B Statistics and Data Center, Duke University, Durham; Hyman B. Muss, University of North Carolina Lineberger Comprehensive Cancer Center, Chapel Hill, NC; Donald A. Berry, University of Texas MD Anderson Cancer Center, Houston, TX; Beryl McCormick and Clifford A. Hudis, Memorial Sloan-Kettering Cancer Center, New York, NY; and William C. Wood, Emory University School of Medicine, Atlanta, GA.

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Written on behalf of the Cancer and Leukemia Group B, Radiation Therapy Oncology Group, and Eastern Cooperative Oncology Group.

Authors' disclosures of potential conflicts of interest and author contributions are found at the end of this article.

Corresponding author: Kevin S. Hughes,

A B S T R A C T

Purpose
To determine whether there is a benefit to adjuvant radiation therapy after breast-conserving surgery and tamoxifen in women age ≥ 70 years with early-stage breast cancer.

Patients and Methods
Between July 1994 and February 1999, 636 women (age ≥ 70 years) who had clinical stage I (T1N0M0 according to TNM classification) estrogen receptor (ER) –positive breast carcinoma treated by lumpectomy were randomly assigned to receive tamoxifen plus radiation therapy (TamRT; 317 women) or tamoxifen alone (Tam; 319 women). Primary end points were time to local or regional recurrence, frequency of mastectomy, breast cancer–specific survival, time to distant metastasis, and overall survival (OS).

Results
Median follow-up for treated patients is now 12.6 years. At 10 years, 98% of patients receiving TamRT (95% CI, 96% to 99%) compared with 90% of those receiving Tam (95% CI, 85% to 93%) were free from local and regional recurrences. There were no significant differences in time to mastectomy, time to distant metastasis, breast cancer–specific survival, or OS between the two groups. Ten-year OS was 67% (95% CI, 62% to 72%) and 66% (95% CI, 61% to 71%) in the TamRT and Tam groups, respectively.

Conclusion
With long-term follow-up, the previously observed small improvement in locoregional recurrence with the addition of radiation therapy remains. However, this does not translate into an advantage in OS, distant disease-free survival, or breast preservation. Depending on the value placed on local recurrence, Tam remains a reasonable option for women age ≥ 70 years with ER-positive early-stage breast cancer.

J Clin Oncol 31:2382-2387. © 2013 by American Society of Clinical Oncology

Studio randomizzato

636 PZ > 70 anni

ER+, T1

↙ ↘

RT+OT OT

(317) (319)

(318)End point primario:

Tempo di recidiva loco regionale

FU 10 anni:

Liberi da recidive locoregionali

RT+OT=98%

OT=90%

Nessuna differenza per tempo di metastasi a distanza, sopravvivenza specifica e globale.

Conclusioni:

La RT non fornisce un beneficio significativo sull'outcome (tranne che per le recidive locoregionali) in questo setting di pz. anziane in stadio I.

CANCER RESEARCH AND TREATMENT

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Omitting Adjuvant Radiotherapy for Hormone Receptor-Positive Early-Stage Breast Cancer in Old Age: A Propensity Score Matched SEER Analysis

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ABSTRACT

Purpose

The purpose of this study was to investigate the non-inferiority of omitting radiotherapy (RT) after breast-conserving surgery (BCS) for hormone receptor (HR)-positive T1No breast cancer in elderly women.

Materials and Methods

From 2004 to 2014, HR-positive T1No breast cancer patients aged 50 years or older and receiving BCS were retrieved from the Surveillance, Epidemiology, and End Results 18 database. After propensity score matching between the no-RT and RT groups, univariate and multivariate analyses were performed. Identified prognostic factors were used to stratify the risk groups. In each risk group, 10-year cancer-specific survival (CSS) rates were compared between the no-RT and RT groups.

Results

After propensity score matching, the numbers of patients in the no-RT and RT groups were both 18,586. For patients who satisfied both a tumor size of 1-10 mm and a tumor grade of 1-2, omitting RT did not decrease the CSS rate at any age group, ranging from ≥ 50 to ≥ 85 years; for patients aged ≥ 50 years, the 10-year CSS rates in the no-RT and RT groups were 97.2% and 96.8%, respectively (adjusted hazard ratio, 0.862; p=0.312). However, for patients with a tumor size of 11-20 mm or tumor grade of 3-4, RT significantly increased the CSS rate irrespective of age.

Conclusion

RT after BCS for HR-positive T1No breast cancer in elderly women might be omitted without causing a decrease in the CSS rate, but only in patients who satisfy both a small tumor size (≤ 10 mm) and low tumor grade (1-2).

La radioterapia nel Ca mammario T1 N0 G1-2 con recettori ormonali positivi nelle donne anziane può essere omessa senza che diminuisca la sopravvivenza cancro specifica

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Breast-Conservative Surgery With and Without Radiotherapy in Patients Aged 55–75 Years With Early-Stage Breast Cancer: A Prospective, Randomized, Multicenter Trial Analysis After 108 Months of Median Follow-up

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ABSTRACT

Objectives. Breast-conserving therapy (BCT), including postoperative whole breast irradiation (WBI), is generally accepted as the treatment of choice for most patients with early-stage breast cancer. The question whether WBI is mandatory in all patients remains one of the most controversial issues in BCT. To answer this question, a randomized, prospective, multicentre study was launched in January 2001. Primary endpoints of the study were to assess the cumulative incidence of in-breast-recurrences (IBR) and overall survival (OAS) after conservative surgery (BCS) with or without WBI.

Methods. From January 2001 until December 2005, 749 patients with unifocal infiltrating breast cancer up to 25 mm, 0–3 positive axillary lymph nodes, no extensive intraductal component or lymphovascular invasion from 11 centres in Italy, were randomly assigned to BCS+WBI (arm 1:373 patients) or BCS alone (arm 2:376 patients). Treatment arms were well balanced in terms of baseline characteristics. Systemic adjuvant therapy was administered according to the institutional policies. Kaplan–Meier method was used for survival analysis and log-rank test to evaluate the difference between the two arms.

Results (Last Analysis 31.12.2012). After median follow-up of 108 months, 12 (3.4 %) IBR were observed in arm 1 and 16 (4.4 %) in arm 2. OAS was 81.4 % in arm 1 and 83.7 % in arm 2. There was no statistically significant difference regarding IBR and death in the two treatment groups.

Conclusions. These data are promising and suggest that WBI after BCS can be omitted in selected patients with early stage breast cancer without exposing them to an increased risk of local recurrence and death. Longer follow-up is needed to further consolidate these results.

Conservative management of breast cancer has become the routine method of choice. In prospective, randomized, clinical trials, breast-conserving therapy (BCT) for early-

Trial randomizzato multicentrico

La domanda che si sono posti è se la WBI è indispensabile per tutte le pazienti. (Studio Milan III, Veronesi, Ann Oncol 2001)

Obiettivi primari:

Incidenza di recidive locali

Sopravvivenza globale

709 pazienti, T1-T2(fino a 25 mm) N0-3.

373 pazienti nel braccio WBI

376 pazienti NO RT.

FU di 108 mesi:

LR: 3.4% WBI – 4.4% NO RT

OS: 81.4% WBI – 83.7% NO RT

Non differenze statisticamente significative.

Conclusioni: per le pazienti in post menopausa in stadio iniziale con basso rischio di LR, potrebbe essere omessa la RT al fine di minimizzare i sovratrattamenti.

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The role of radiotherapy in elderly women with early-stage breast cancer treated with breast conserving surgery.

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OBJECTIVE:

To analyze the impact of adjuvant radiotherapy (RT) on ipsilateral breast recurrence (IBR) and overall survival (OS) in patients older than 69 years with early-stage breast cancer.

METHODS:

From January 2007 to June 2015, we analyzed retrospectively 137 women with estrogen receptor-positive T1-2 invasive breast cancer, with negative axillary lymph nodes, dividing them into 2 subgroups: 70 to 79 years and older than 79 years.

RESULTS:

After a median follow-up of 43.2 months, the 3-year IBR-free survival in patients treated with surgery plus RT was 98.8% and 92.1% in patients treated with surgery alone, with a significant difference ($p = .01$). Radiotherapy did not impact overall survival ($p = .10$). A higher percentage of patients aged between 70 and 79 years received RT after conservative surgery if compared with the older subgroup ($p < .01$).

CONCLUSIONS:

In elderly women, adjuvant RT reduced the IBR, but did not improve OS.

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Ad oggi non sono identificati sottogruppi di pazienti nelle quali la RT postoperatoria possa essere omessa con certezza (3). Tuttavia, alla luce dei dati disponibili, in pazienti selezionate a prognosi favorevole, a basso rischio di ripresa di malattia (età ≥ 70 anni, neoplasia T1N0, recettori per estrogeni positivi, caratterizzazione biopatologica favorevole) e sottoposte a ormonoterapia adiuvante può essere condivisa l'astensione dalla RT postoperatoria (4-6). In quest'ottica è fondamentale l'individualizzazione del trattamento, anche in base allo stato di salute della paziente e al rischio di mortalità per cause competitive e quindi dell'aspettativa di vita. La possibilità di omettere la RT dopo chirurgia conservativa anche in pazienti di età < 70 anni è stata oggetto di recenti studi , con riscontro di solo un modesto aumento dell'incidenza di recidive locali (4, 5).

GRAZIE