

**9TH AARHUS WORKSHOP IN BREAST SURGERY
MAY 19TH 2021**

**BCS VS. MASTECTOMY
LOCAL CONTROL**

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G.RE.T.A. Scientific Director



LOCAL CONTROL: BCT VS. MASTECTOMY FOR ESBC

BREAST CONSERVATION TREATMENT HAS BECOME ESTABLISHED OVER THE PAST 40 YEARS AS THE PREFERRED STANDARD OF SURGICAL MANAGEMENT FOR WOMEN WITH EARLY STAGE BREAST CANCER

AVAILABLE FROM SEVERAL RCTs DEMONSTRATING SURVIVAL EQUIVALENCE FOR BCT COMPARED WITH MASTECTOMY

SEVERAL OBSERVATIONAL STUDIES HAVE REPORTED THAT BCS + RT IS ASSOCIATED WITH IMPROVED SURVIVAL OUTCOMES WHEN COMPARED WITH MASTECTOMY

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VOLUME 347

OCTOBER 17, 2002

NUMBER 16



TWENTY-YEAR FOLLOW-UP OF A RANDOMIZED STUDY COMPARING
BREAST-CONSERVING SURGERY WITH RADICAL MASTECTOMY
FOR EARLY BREAST CANCER

UMBERTO VERONESI, M.D., NATALE CASCINELLI, M.D., LUIGI MARIANI, M.D., MARCO GRECO, M.D.,
ROBERTO SACCOZZI, M.D., ALBERTO LUINI, M.D., MARISEL AGUILAR, M.D., AND ETTORE MARUBINI, PH.D.

TOTAL MASTECTOMY VERSUS LUMPECTOMY

TWENTY-YEAR FOLLOW-UP OF A RANDOMIZED TRIAL COMPARING TOTAL
MASTECTOMY, LUMPECTOMY, AND LUMPECTOMY PLUS IRRADIATION
FOR THE TREATMENT OF INVASIVE BREAST CANCER

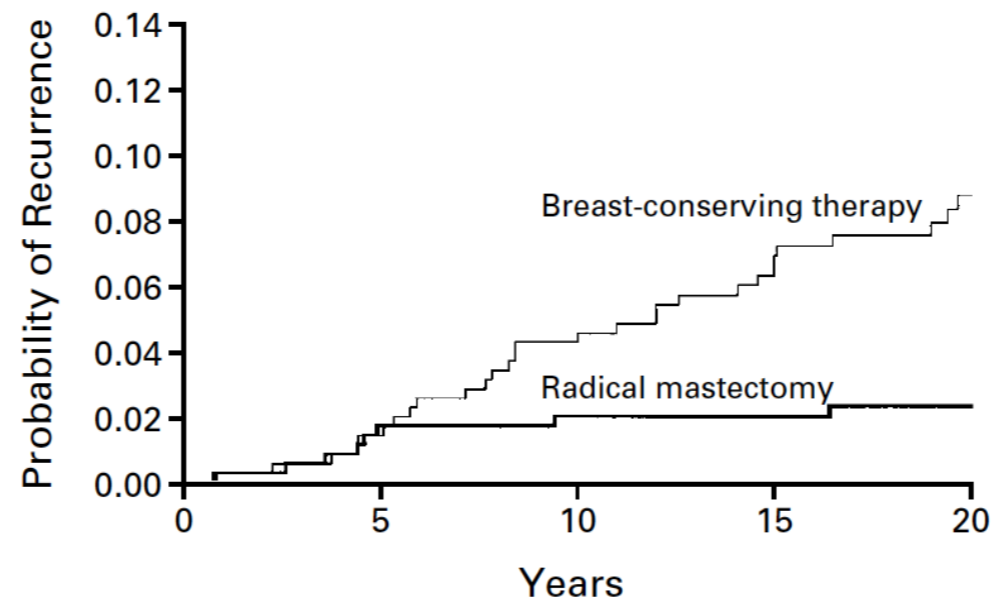
BERNARD FISHER, M.D., STEWART ANDERSON, PH.D., JOHN BRYANT, PH.D., RICHARD G. MARGOLESE, M.D.,
MELVIN DEUTSCH, M.D., EDWIN R. FISHER, M.D., JONG-HYEON JEONG, PH.D., AND NORMAN WOLMARK, M.D.

N Engl J Med, Vol. 347, No. 16 · October 17, 2002



LOCAL CONTROL: BCT VS. MASTECTOMY FOR ESBC

CURRENT TUMOR WAS SIGNIFICANTLY HIGHER IN THE GROUP THAT RECEIVED BCT THAN IN THE RADICAL MASTECTOMY GROUP (30/352 VS. 8/349 PATIENTS, P<0.001)



MEAN CRUDE CUMULATIVE INCIDENCE OF RECURRENT TUMOR IN THE SAME BREAST AFTER 20 YEARS
8.8% (+/- 3.2) IN THE BCT GROUP
VS. 2.3% (+/- 0.8) IN THE RADICAL MASTECTOMY GROUP

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LOCAL CONTROL: BCT VS. MASTECTOMY FOR ESBC

LOCOREGIONAL RECURRENCE

BCT ARM 11.8% AT 5 YEARS AND 19.7% AT 10 YEARS

MASTECTOMY ARM 9.8% AT 5 YEARS AND 12.2% AT 10 YEARS

**LOCOREGIONAL RECURRENCE SIGNIFICANTLY HIGHER
FOR THE PATIENTS ASSIGNED TO BCT THAN MASTECTOMY (P 0.0097)**

Long-Term Results of a Randomized Trial Comparing Breast-Conserving Therapy With Mastectomy: European Organization for Research and Treatment of Cancer 10801 Trial

Joop A. van Dongen, Adri C. Voogd, Ian S. Fentiman, Catherine Legrand, Richard J. Sylvester, David Tong, Emmanuel van der Schueren, Peter A. Helle, Kobus van Zijl, Harry Bartelink

Journal of the National Cancer Institute, Vol. 92, No. 14, July 19, 2000



LOCAL CONTROL: BCT VS. MASTECTOMY FOR ESBC

**LOCAL CONTROL AFTER BCT EQUALS THAT OF MASTECTOMY
(CRUDE % 4.5 VS. 6.9, p=0.16)**

Long-term results of breast conserving surgery vs. mastectomy for early stage invasive breast cancer: 20-year follow-up of the Danish randomized DBCG-82TM protocol

MOGENS BLICHERT-TOFT¹, MAJA NIELSEN¹, MARIA DÜRING¹,
SUSANNE MØLLER¹, FRITZ RANK², MARIE OVERGAARD³ &
HENNING T. MOURIDSEN¹

¹The Danish Breast Cancer Cooperative Group, DBCG, Rigshospitalet, Copenhagen, Denmark, ²Department of Pathology, Rigshospitalet, Copenhagen, Denmark, and ³Department of Oncology and Radiotherapy, Aarhus University Hospital, Aarhus, Denmark

Acta Oncologica, 2008; 47: 672–681



LOCAL CONTROL: BCT VS. MASTECTOMY FOR ESBC

TABLE 3. Comparison of Types of Relapse by Surgical Treatment

	Tumorectomy	Mastectomy
No. of patients	88	91
5-year local recurrence rate	5%	12%
5-year distant metastasis rate	12%	18%

NOT SIGNIFICANT DIFFERENCES

Conservative Treatment Versus Mastectomy in Breast Cancer Tumors With Macroscopic Diameter of 20 Millimeters or Less

The Experience of the Institut Gustave-Roussy

DANIÈLE SARRAZIN, MD,* MONIQUE LÉ, MD,† JACQUES ROUËSSÉ, MD,* GENEVIÈVE CONTESSO, MD,*
JEAN-YVES PETIT, MD,* JEAN LACOUR, MD,* JANINE VIGUIER,* AND CATHERINE HILL*

***Cancer* 53:1209–1213, 1984.**



LOCAL CONTROL: BCT VS. MASTECTOMY FOR ESBC

3518 PATIENTS IN THE SWEDISH MULTICENTRE COHORT STUDY
2338 BCS + RT
429 MASTECTOMY WITHOUT RT
MEDIAN FOLLOW-UP 156 MONTHS

LOCAL RECURRENCE RATE DID NOT DIFFER BETWEEN THE TWO GROUPS
(13-YEAR LOCAL RECURRENCE-FREE SURVIVAL RATES
OF 90.5% (BCS + RT) VS 95.1% (MASTECTOMY WITHOUT RT) (P=0.428))

**Breast-conserving surgery followed by whole-breast irradiation
offers survival benefits over mastectomy without irradiation**

J. de Boniface^{1,2} , J. Frisell^{1,3}, L. Bergkvist^{4,5} and Y. Andersson^{4,5}

BJS 2018; 105: 1607–1614





LOCAL CONTROL: BCT VS. MASTECTOMY FOR ESBC

**AFTER ADJUSTING FOR AGE, TUMOR CHARACTERISTICS AND THERAPIES,
MULTIVARIABLE ANALYSIS FOR LOCAL RECURRENCE-FREE SURVIVAL IDENTIFIED
BCT AS AN INDEPENDENT PREDICTOR FOR IMPROVED LOCAL CONTROL
(HR: 1.517; 95% CI 1.092-2.108; p=0.013)
AS COMPARED TO MASTECTOMY ALONE IN THE MATCHED COHORT**

Outcome	Treatment Modality	Entire Cohort			Case Control Cohort		
		Diagnosis 1998–2014 7565 Patients			Diagnosis 1998–2014 1802 Patients		
		5 y (%)	10 y (%)	<i>p</i>	5 y (%)	10 y (%)	<i>p</i>
LR	BCS + RT	3.2	8.2	<0.001	4.6	9.4	0.025
	Mastectomy	5.0	12.6		4.8	12.9	
LNR	BCS + RT	0.9	2.2	<0.001	0.7	2.0	<0.001
	Mastectomy	2.6	5.7		2.5	5.8	
DRFS	BCS + RT	94.5	90.2	<0.001	93.8	89.4	0.013
	Mastectomy	92.0	84.8		93.1	85.5	
OS	BCS + RT	95.2	86.7	<0.001	93.8	85.3	<0.001
	Mastectomy	90.5	77.6		92.2	79.3	

Mastectomy or Breast-Conserving Therapy for Early Breast Cancer in Real-Life Clinical Practice: Outcome Comparison of 7565 Cases

Stefanie Corradini ^{1,*} , Daniel Reitz ¹ , Montserrat Pazos ¹, Stephan Schönecker ¹, Michael Braun ², Nadia Harbeck ³, Christiane Matuschek ⁴, Edwin Bölke ⁴, Ute Ganswindt ⁵, Filippo Alongi ⁶, Maximilian Niyazi ¹ and Claus Belka ¹



LOCAL CONTROL: BCT VS. MASTECTOMY FOR ESBC

286 PATIENTS WITH STAGE 1 AND 2 BREAST CANCER
TREATED WITH BCT OR TM BETWEEN 2001 AND 2011

5-YEAR CUMULATIVE INCIDENCE OF LOCOREGIONAL RECURRENCE
WAS 2.5% FOR BCT VERSUS 9.5% FOR TM (p=0.016)

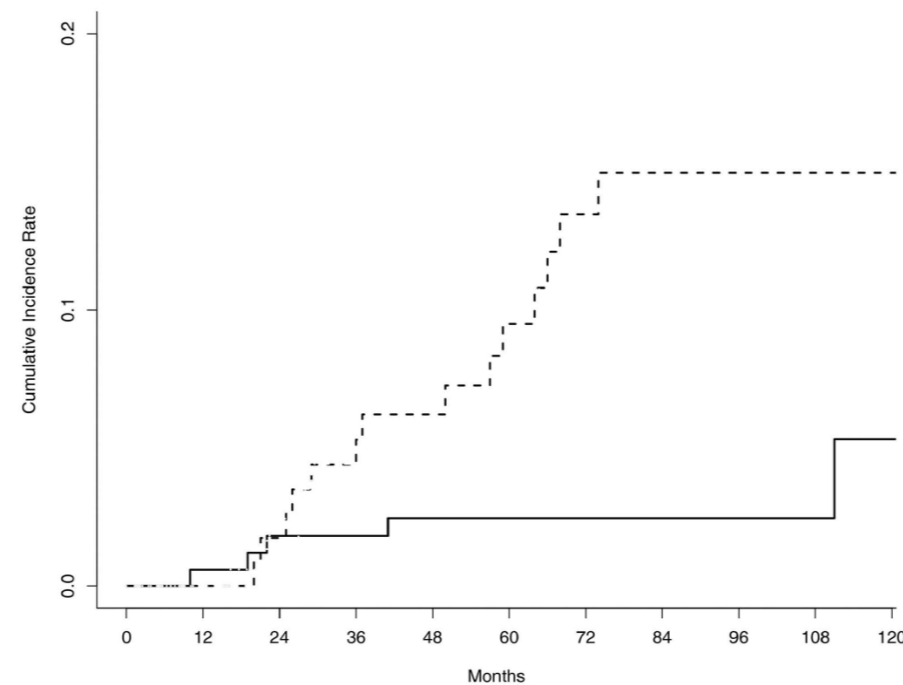


Fig 1. Comparison of the 5-year cumulative incidence rate of locoregional recurrence between the breast-conserving surgery plus radiotherapy (solid line) and total mastectomy alone groups (dotted line).

Comparison of Treatment Outcomes
between Breast Conserving Surgery Followed
by Radiotherapy and Mastectomy Alone in
Patients with T1-2 Stage and 1-3 Axillary
Lymph Nodes in the Era of Modern Adjuvant
Systemic Treatments

Sang-Won Kim¹, Mison Chun^{1*}, Sehwan Han², Yong Sik Jung², Jin Hyuk Choi³, Seok
Yun Kang³, Hyunsoo Jang⁴, Sunmi Jo⁵



LOCAL CONTROL: BCT VS. MASTECTOMY FOR ESBC

MANAGEMENT OF BREAST CANCER PATIENTS HAS DRAMATICALLY IMPROVED

OUT WHEN ADJUVANT TREATMENTS WERE NOT ROUTINELY ADMINISTERED TO ALL HIGH-RISK PATIENTS

WHEN SURVIVAL AND LOCAL CONTROL WAS POORER, GENETIC PREDISPOSITION WAS STILL UNKNOWN AND RT WAS LESS ADVANCED WITH

IN THOSE YEARS THE RISK OF LR WAS ESTIMATED TO BE
AROUND 1% PER YEAR TRANSLATING INTO 10% AT 10 YEARS



LOCAL CONTROL: BCT VS. MASTECTOMY FOR ESBC

LOCAL RECURRENCES AFTER BCT TODAY

IN THE WBI GROUP
THE 5-YEAR IBTR RATE WAS 0.5%,
THE 10-YEAR RATE WAS 1.1%
AND THE 15-YEAR RATE WAS 2.4%

[Roberto Orecchia](#), [Umberto Veronesi](#) et al.

Intraoperative irradiation for early breast cancer (ELIOT): long-term recurrence and survival outcomes from a single-centre, randomised, phase 3 trial
[Lancet Onco 2021 Apr](#)

LOCAL CONTROL: BCT VS. MASTECTOMY FOR ESBC

EJSO 42 (2016) 1636–1641

Review

Should patients with early breast cancer still be offered the choice of breast conserving surgery or mastectomy?

N. Johns, J.M. Dixon*

Edinburgh Breast Unit, Western General Hospital, Edinburgh, EH4 2XU, UK



LOCAL CONTROL: BCT VS. MASTECTOMY FOLLOWING PRIMARY SYSTEMIC THERAPIES FOR LABC

Table 1
Study information and baseline characteristic of patients.

Author Year	Country	Medium follow-up, mo	Enrollment interval, yr	Age, yr	Surgery (BCS/MT)	NACT	Adjuvant therapy	NOS
Schwartz ^[23] 1994	USA	46	1983–1991	55	55/103	CMF	CT, RT	7
Cance ^[24] 2002	USA	70	1992–1998	44	21/38	CMF	CT, RT	7
McIntosh ^[25] 2003	UK	62	1992–1997	51	44/115	CVAP	RT, ET	6
Rouzier ^[26] 2004	France	67	1987–2001	50	287/307	AVCMF/CAF/CEF	CT, RT, ET	8
Sadetzki ^[27] 2005	Israel	>27	1995–2001	<70	79/40	anthracycline-based	RT	7
Parmar ^[28] 2006	India	30	1998–2002	47.6	188/476	CAF/CEF	CT, RT, ET	8
Clouth ^[29] 2007	UK	33.5	2001–2005	48.2	60/40	TAC	RT, ET	5
Beadle ^[30] 2009	USA	91	1973–2006	33	44/56	NA	RT	7
Sweeting ^[31] 2011	USA	76.8	1991–2007	39	54/68	anthracycline/taxane based	RT, ET, BT	7
Meyers ^[32] 2011	USA	55	1991–2005	49	49/100	anthracycline/taxane based	RT, BT	7
Cho ^[33] 2013	Korea	45.9	1998–2010	49	124/307	anthracycline/taxane based	RT, ET	8
Shin ^[34] 2013	Korea	62.4	2004–2007	45.8	72/57	DA/AC/FEC	CT, RT	8
Levy ^[35] 2014	France	75.6	2002–2012	49	111/173	anthracycline/taxane based	RT, ET, BT	8
Cureton ^[36] 2014	USA	46.8	2002–2006	49.1	83/109	anthracycline/taxane based	RT	6
Barranger ^[37] 2015	France	41.1	2007–2012	49.6	86/33	FEC+D	RT, ET	7
Debled ^[38] 2015	France	38	2005–2012	49.6	108/44	FEC+D	RT, BT	7

PATIENTS AFFECTED BY LABC WITH GOOD RESPONSE TO NACT SHOWED NO SIGNIFICANT DIFFERENCES IN TERMS OF LR RATES (OR 0.83; 95% CI 0.60-1.15, P 0.26) IN BCT COMPARED TO MASTECTOMY

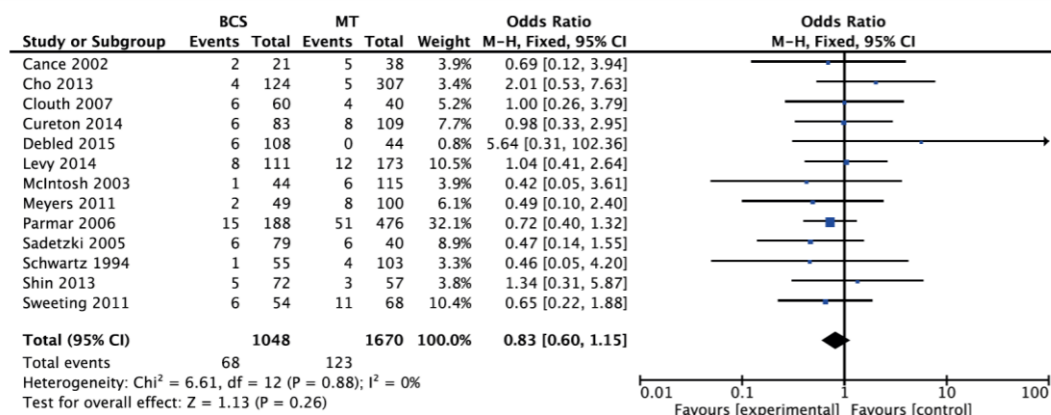


Figure 3. A Forest plot of the pooled odd ratio (OR) of local recurrence (LR) for the BCS and MT group. BCS = breast-conserving surgery, CI = confidence interval, MT = mastectomy.

WHILE FIGURING OUT A HIGHER OS (OR 2.12; 95% CI 1.51-2.98, P<0.01) IN BCT COMPARED WITH MASTECTOMY

Comparison of breast-conserving surgery with mastectomy in locally advanced breast cancer after good response to neoadjuvant chemotherapy A PRISMA-compliant systematic review and meta-analysis

Yixuan Sun^a, Mingjuan Liao, MD, PhD^b, Liu He, MD^{c,*}, Chenfang Zhu, MD, PhD^{c,*}

Medicine (2017) 96:43



LOCAL CONTROL: BCT VS. MASTECTOMY IN BRCA MUTATION CARRIERS

**BRCA CARRIERS PATIENTS WHO UNDERWENT BCT
HAD HIGHER RISK FOR IBTR THAN PATIENTS TREATED WITH MASTECTOMY
(15-YEAR CUMULATIVE ESTIMATED RISK 23.5 VS. 5.5%)**

OS WAS SIMILAR BETWEEN THE TWO GROUPS AT 15 YEARS

**IBTR IN BCT GROUP CONSISTED MOSTLY OF NEW PRIMARY CANCERS
WHILE IN MASTECTOMY GROUP OF TRUE RECURRENCES**

EFFECT THE DIFFERENCE IN THE TYPE OF IBTR BETWEEN THE TWO GROUPS SINCE NEW PRIMARY CANCER

LOCAL CONTROL: BCT VS. MASTECTOMY IN BRCA MUTATION CARRIERS

AND UNILATERAL MASTECTOMY TO TREAT EARLY STAGE BREAST CANCER IN BRCA MUTATION CARRIERS

**THE RISK OF TRUE RECURRENCE IS NOT INCREASED IN BRCA CARRIERS UNDERGOING BCT,
BUT THE RISK OF SECOND PRIMARY CANCERS IN BOTH BREASTS IS ELEVATED**

**THE RISK OF CONTRALATERAL CANCER VARIES BY MUTATION (BRCA1 > BRCA2)
AND AGE AT CANCER DIAGNOSIS**

MANDATORY FOR ANY PATIENT SUBSET, BUT OFFERS THE GREATEST BENEFIT IN YOUNG BRCA1 CARRIERS

Breast Cancer Res Treat
DOI 10.1007/s10549-014-2890-1

REVIEW

**Surgical management of breast cancer in BRCA-mutation
carriers: a systematic review and meta-analysis**

Antonis Valachis · Andreas D. Nearchou ·
Pehr Lind



LOCAL CONTROL FOLLOWING BCT: RISK FACTORS FOR RECURRENCE

**TWO FACTORS EMERGE AS
PRINCIPAL DETERMINANTS OF TRUE LOCAL RECURRENCE
WITHIN THE IPSILATERAL BREAST
FOLLOWING BCT:
MARGIN STATUS AND
THE PRESENCE OR ABSENCE OF AN EXTENSIVE INTRADUCTAL COMPONENT (EIC)**

Risk Factors for Local Recurrence in Patients With Invasive Breast Cancer and Negative Surgical Margins of Excision

Where Are We and Where Are We Going?

Stuart J. Schmitt, MD

Am J Clin Pathol 2003;120:485-488



LOCAL CONTROL FOLLOWING BCT: THE ROLE OF MARGINS

**POSITIVE MARGINS FOLLOWING BCS FOR INVASIVE BREAST CANCER ARE ASSOCIATED WITH
A TWO-FOLD INCREASE IN THE RISK OF IBTR COMPARED WITH NEGATIVE MARGINS**

**THE INCREASED RISK IS NOT MITIGATED BY FAVOURABLE BIOLOGY,
ENDOCRINE THERAPY OR A RADIATION BOOST**

**MORE WIDELY CLEAR MARGINS DO NOT SIGNIFICANTLY DECREASE THE RATE OF IBTR
COMPARED WITH NO INK ON TUMOR**

**THERE IS NO EVIDENCE THAT MORE WIDELY CLEAR MARGINS REDUCE IBTR
FOR THOSE WITH UNFAVORABLE BIOLOGY, LOBULAR CANCERS OR CANCERS WITH AN EXTENSIVE IN**

VOLUME 32 · NUMBER 14 · MAY 10 2014

JOURNAL OF CLINICAL ONCOLOGY

SPECIAL ARTICLE

Society of Surgical Oncology–American Society for
Radiation Oncology Consensus Guideline on Margins for
Breast-Conserving Surgery With Whole-Breast Irradiation
in Stages I and II Invasive Breast Cancer

*Meena S. Moran, Stuart J. Schnitt, Armando E. Giuliano, Jay R. Harris, Seema A. Khan, Janet Horton,
Suzanne Klimberg, Mariana Chavez-MacGregor, Gary Freedman, Nehmat Houssami, Peggy L. Johnson,
and Monica Morrow*



LOCAL CONTROL FOLLOWING BCT: THE ROLE OF MARGINS

DATA OF MULTIDISCIPLINARY THERAPY IS ASSOCIATED WITH LOW RATES OF IBTR AND HAS THE POTENTIAL

VOLUME 32 · NUMBER 14 · MAY 10 2014

JOURNAL OF CLINICAL ONCOLOGY

SPECIAL ARTICLE

Society of Surgical Oncology–American Society for Radiation Oncology Consensus Guideline on Margins for Breast-Conserving Surgery With Whole-Breast Irradiation in Stages I and II Invasive Breast Cancer

*Meena S. Moran, Stuart J. Schnitt, Armando E. Giuliano, Jay R. Harris, Seema A. Khan, Janet Horton,
Suzanne Klimberg, Mariana Chavez-MacGregor, Gary Freedman, Nehmat Houssami, Peggy L. Johnson,
and Monica Morrow*



LOCAL CONTROL FOLLOWING BCT: THE ROLE OF MARGINS

THE 2019 ST.GALLEN BREAST CANCER CONSENSUS CONFERENCE CONFIRMS THE ADOPTION OF A NO INK ON TUMOR POLICY FOR THE CONSERVING TREATMENT OF INVASIVE BREAST CANCER IRRESPECTIVE OF BIOLOGICAL TUMOR TYPE

Estimating the benefits of therapy for early-stage breast cancer: the St. Gallen International Consensus Guidelines for the primary therapy of early breast cancer 2019

H. J. Burstein^{1*}, G. Curigliano^{2**}, S. Loibl³, P. Dubsy⁴, M. Gnant⁵, P. Poortmans^{6,7}, M. Colleoni², C. Denkert⁸, M. Piccart-Gebhart⁹, M. Regan¹⁰, H.-J. Senn¹¹, E. P. Winer^{1‡}, B. Thurlimann^{11‡} & Members of the St. Gallen International Consensus Panel on the Primary Therapy of Early Breast Cancer 2019⁵





MARGIN STATUS RECOMMENDATIONS AFTER BREAST-CONSERVING SURGERY FOR INVASIVE CANCERS AND DCIS

Invasive Breast Cancer

• For invasive breast cancers that have a component of DCIS, regardless of the extent of DCIS, the negative margin definition of “no ink on tumor” should be based on the invasive margin guideline. In this setting, “no ink on tumor” is recommended for either DCIS or invasive cancer cells, primarily because the natural history, treatment, and outcomes of these lesions are more similar to invasive cancer than DCIS.

- For specifically challenging cases, clinical judgment and discussion with the patient should precede routine re-excision.
- These margin recommendations cannot be applied directly to patients undergoing APBI,¹ where data regarding local recurrence are more limited. Furthermore, individualized clinical judgment should be utilized on a case-by-case basis, using postoperative mammography to identify residual calcifications and clinical-pathologic factors such as quantitative extent of disease near margin, presence of extensive intraductal component (EIC),³ young age, or multiple close margins to assist in identifying patients who may have an increased risk of IBTR and therefore may be selected to benefit from re-excision.
 - For patients with invasive breast cancer after BCS, with microscopically focally positive margins (in the absence of an EIC),³ the use of a higher radiation boost dose to the tumor bed may be considered, since generally a boost to the tumor bed is recommended for patients at higher risk of recurrence. [See BINV-I.](#)

	No ink on tumor	2-mm margin	No margin necessary
Invasive breast cancer	X		
Invasive breast cancer + DCIS	X		
Invasive breast cancer + extensive DCIS	X		
Pure DCIS		X	
DCIS with microinvasion		X	
Pure LCIS* at surgical margin			X
Atypia at surgical margin			X

*For pleomorphic LCIS, the optimal width of margins is not known.

¹ Moran MS, Schnitt SJ, Giuliano AE, et al. Society of Surgical Oncology-American Society for Radiation Oncology consensus guideline on margins for breast-conserving surgery with whole-breast irradiation in stages I and II invasive breast cancer. J Clin Oncol 2014 May 10;32(14):1507-1515.

³ EIC is defined as an infiltrating ductal cancer where >25% of the tumor volume is DCIS and DCIS extends beyond the invasive cancer into surrounding normal breast parenchyma.

Note: All recommendations are category 2A unless otherwise indicated.
Clinical Trials: NCCN believes that the best management of any patient with cancer is in a clinical trial. Participation in clinical trials is especially encouraged.

LOCAL CONTROL FOLLOWING MASTECTOMY

**IN CONTRAST TO LOCAL RECURRENCE FOLLOWING BCT,
LOCAL FAILURE AFTER MASTECTOMY IS MORE CLOSELY CORRELATED
WITH THE CONVENTIONAL HISTOLOGICAL PARAMETERS OF
TUMOR SIZE, HISTOLOGICAL GRADE AND NODAL STATUS**

**CHEST WALL RECURRENCE IS ALSO INCREASED WHEN
LYMPHOVASCULAR INVASION IS PROMINENT**

Locoregionally recurrent breast cancer: incidence,
risk factors and survival

M. Clemons^{*†}, S. Danson^{*}, T. Hamilton[†] and P. Goss[†]

CANCER TREATMENT REVIEWS 2001; **27**: 67–82



LOCAL CONTROL FOLLOWING MASTECTOMY: THE IMPACT OF “CONSERVATIVE MASTECTOMIES”

**SOME AUTHORS SHOWED SSMs AND NSMs AS INDEPENDENT RISK FACTORS
FOR LOCAL RECURRENCE**

Review Article

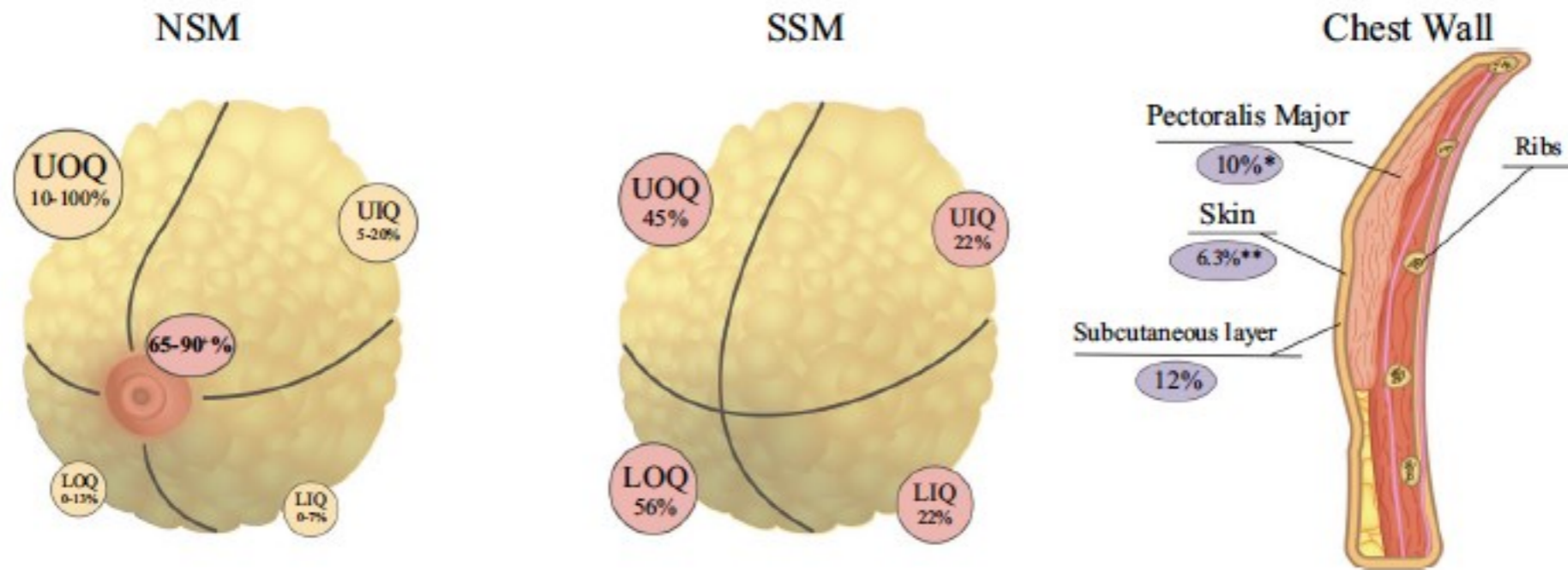
What is the evidence behind conservative mastectomies?

Nicola Rocco¹, Giuseppe Catanuto², Maurizio Bruno Nava³

Gland Surgery 2015;4(6):506-518




LOCAL CONTROL FOLLOWING MASTECTOMY: THE ROLE OF RESIDUAL GLANDULAR TISSUE



THE RATE OF RESIDUAL GLANDULAR BREAST TISSUE WAS REPORTED IN UP TO 100% OF THE PATIENTS AND WAS FOUND TO BE ASSOCIATED MAINLY WITH THE TYPE OF SURGICAL RESECTION, INDICATION AND SURGEON'S EXPERTISE

ALL AREAS OF THE REMAINING CHEST WALL, MOSTLY IN THE SKIN FLAPS AND MORE FREQUENTLY U

Residual Glandular Breast Tissue After Mastectomy: A Systematic Review

Orit Kaidar-Person, MD^{1,2} , Liesbeth J. Boersma, MD, PhD³, Philip Poortmans, MD, PhD⁴, Miri Sklair-Levy, MD⁵, Birgitte Vrou Offersen, MD, PhD⁶, Maria-Joao Cardoso, MD, PhD⁷, and Dirk de Ruyscher, MD, PhD³

Ann Surg Oncol 30 April 2020



LOCAL CONTROL FOLLOWING MASTECTOMY: THE IMPACT OF “CONSERVATIVE MASTECTOMIES”

NO RCTs COMPARING SSMs AND NSMs WITH STANDARD MASTECTOMIES HAVE BEEN CONDUCTED, BUT SEVERAL RETROSPECTIVE SERIES AND SOME PROSPECTIVE COHORTS PRESENTED DATA DEMONSTRATING THE EQUIVALENCE OF SSM/NSM AND SM IN TERMS OF LR AND OS



Nipple- and areola-sparing mastectomy for the treatment of breast cancer (Review)

Mota BS, Riera R, Ricci MD, Barrett J, de Castria TB, Atallah ÁN, Bevilacqua JLB

Cochrane Database of Systematic Reviews 2016, Issue 11. Art. No.: CD008932.

DOI: 10.1002/14651858.CD008932.pub3.



**LOCAL CONTROL FOLLOWING MASTECTOMY:
THE IMPACT “CONSERVATIVE MASTECTOMIES”**

**IF NO MARGINS POLICIES NEEDED TO BE ADOPTED WITH STANDARD MASTECTOMY,
SO-CALLED CONSERVATIVE MASTECTOMIES
EXTEND THE NEED OF MARGIN EVALUATIONS TO SSM AND NSM AS WELL**

**SHOULD THE SAME MARGIN POLICIES BE ADOPTED
FOR CONSERVATIVE MASTECTOMIES AS FOR BCS?**

THE SSO GUIDELINES REFERS TO BCS + RT

**COULD AN ANTERIOR SUB-CUTANEOUS/RETROAREOLAR MARGIN
NO-INK (FOR IDC) AND 2-MM (FOR PURE DCIS) POLICY BE ADOPTED?**

Ann Surg Oncol (2015) 22:3764–3766
DOI 10.1245/s10434-015-4648-3

Annals of
SURGICAL ONCOLOGY
OFFICIAL JOURNAL OF THE SOCIETY OF SURGICAL ONCOLOGY



EDITORIAL – BREAST ONCOLOGY

The Nipple is Just Another Margin

Suzanne B. Coopey, MD and Barbara L. Smith, MD, PhD

Division of Surgical Oncology, Massachusetts General Hospital, Harvard Medical School, Boston



LOCAL CONTROL FOLLOWING BCT: YOUNG AGE

YOUNG AGE HAS BEEN DEMONSTRATED AS AN INDEPENDENT RISK FACTOR FOR LOCAL RECURRENCE AFTER

Predictors of Locoregional Recurrence Among Patients With Early-Stage Breast Cancer Treated With Breast-Conserving Therapy

Nadeem Q. Mirza, MD, MPH, Georges Vlastos, MD, Funda Meric, MD,
Thomas A. Buchholz, MD, Nestor Esnaola, MD, MPH, S. Eva Singletary, MD,
Henry M. Kuerer, MD, PhD, Lisa A. Newman, MD, Frederick C. Ames, MD,
Merrick I. Ross, MD, Barry W. Feig, MD, Raphael E. Pollock, MD, PhD,
Marsha McNeese, MD, Eric Strom, MD, and Kelly K. Hunt, MD



LOCAL CONTROL FOLLOWING BCT: YOUNG AGE

**536 PATIENTS ≤ 40 YEARS OF AGE AT DIAGNOSIS WITH T1N0-3 BC
TREATED BETWEEN 1989 AND 2005
MEDIAN FOLLOW-UP 9 YEARS**

**AFTER BCT PATIENTS HAD A THREEFOLD HIGHER RISK OF LRR THAN AFTER MASTECTOMY
(HR 2.9; 95% CI 1.6-5.3)**

BCT WAS NOT NEGATIVELY ASSOCIATED WITH DISTANT METASTASES OR DEATH AFTER LRR (HR 0.47; 9

Breast Cancer Res Treat (2013) 140:577–585
DOI 10.1007/s10549-013-2650-7

EPIDEMIOLOGY

Impact of primary local treatment on the development of distant metastases or death through locoregional recurrence in young breast cancer patients

E. J. Bantema-Joppe · E. R. van den Heuvel · L. de Munck · G. H. de Bock ·
W. G. J. M. Smit · P. R. Timmer · W. V. Dolsma · L. Jansen · C. P. Schröder ·
S. Siesling · J. A. Langendijk · J. H. Maduro



LOCAL CONTROL FOLLOWING BCT: YOUNG AGE

**CONVERSELY, IN A SUBSET ANALYSIS OF 101 PATIENTS ≤ 35 YEARS WITH STAGE I BC,
NO SIGNIFICANT DIFFERENCE WAS OBSERVED IN THE 10-YEAR LRR
(18% BCT VS. 19.8% MASTECTOMY),
DISTANT METASTASES AND OS
WHEN COMPARING BCS VS. MASTECTOMY**

TEN-YEAR RECURRENCE RATES IN YOUNG WOMEN WITH BREAST CANCER BY LOCOREGIONAL TREATMENT APPROACH

BETH M. BEADLE, M.D., PH.D.,* WENDY A. WOODWARD, M.D., PH.D.,* SUSAN L. TUCKER, PH.D.,[†]
ELESYIA D. OUTLAW, M.D.,* PAMELA K. ALLEN, PH.D.,* JULIA L. OH, M.D.,* ERIC A. STROM, M.D.,*
GEORGE H. PERKINS, M.D.,* WELELA TEREFFE, M.D.,* TSE-KUAN YU, M.D., PH.D.,*
FUNDA MERIC-BERNSTAM, M.D.,[‡] JENNIFER K. LITTON, M.D.,[§] AND THOMAS A. BUCHHOLZ, M.D.*

Int. J. Radiation Oncology Biol. Phys., Vol. 73, No. 3, pp. 734–744, 2009



LOCAL CONTROL FOLLOWING BCT: YOUNG AGE

THE RESULTS OF THIS META-ANALYSIS SUPPORT THE USE OF BCT IN YOUNG PATIENTS AS WELL

THIS OBSERVATION APPEARS TO BE EVEN MORE EVIDENT IN THE SUBSET OF NODE POSITIVE PATIENTS

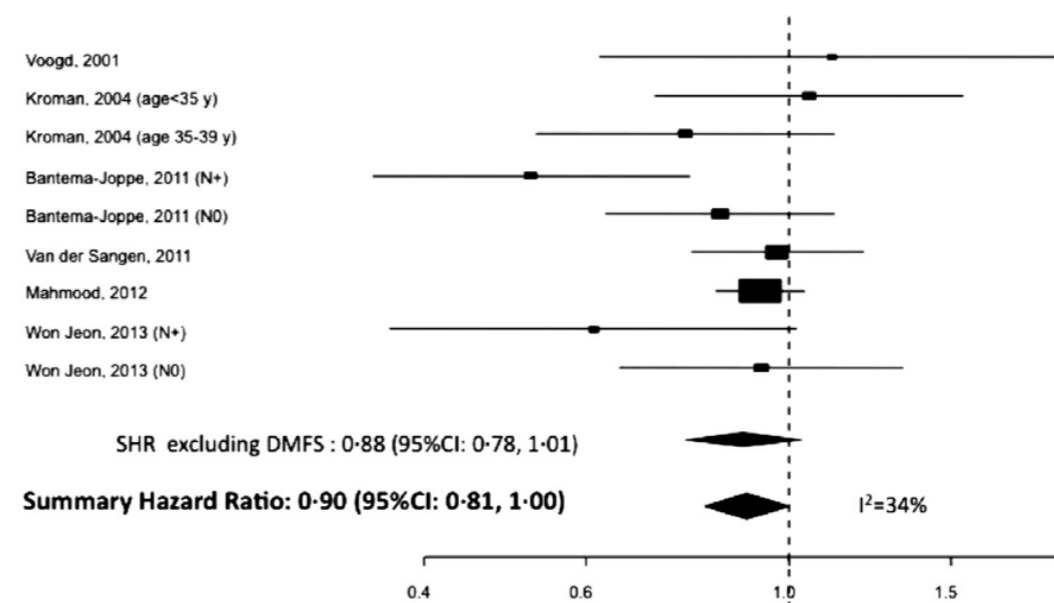
AGGRESSIVE SURGICAL ATTITUDE DOES NOT TRANSLATE INTO AN INCREASED LIKELIHOOD OF SURVIVING B

Overall survival according to type of surgery in young (≤ 40 years) early breast cancer patients: A systematic meta-analysis comparing breast-conserving surgery versus mastectomy

Jose Vila ^a, Sara Gandini ^b, Oreste Gentilini ^{a,*}

The Breast 24 (2015) 175–181

Forest plot analysis of survival outcomes in young patients (age ≤ 40) comparing BCS and mastectomy



LOCAL CONTROL: THE ROLE OF BIOLOGICAL SUBTYPES

AN INCREASING BODY OF EVIDENCE SUGGESTS THAT THE RISK OF LOCAL RECURRENCE FOLLOWING BCT VARIES BY SUBTYPE, WITH THE LUMINAL A GROUP AND THE HIGHEST RISK IN THE TRIPLE NEGATIVE GROUP AND THE HER 2 OV

Impact of molecular subtype on local control.

Author	Follow-up (years)	Number of patients	(%Local recurrence)			
			Luminal A	Luminal B	HER2 ^a	Basal
Breast-conserving therapy						
Millar [8]	5	498	1.0	4.3	7.7	9.6
Voduc [9]	10	1461	8.0	10.0	21.0	14.0
Arvold [6]	5	1434	0.8	2.3	10.9	8.8
Mastectomy						
Voduc [9]	10	2985	8	14	17	19
Kyndi [7]	5	489	2	3	13	21

Personalizing extent of breast cancer surgery according to molecular subtypes

Monica Morrow*

LOCAL CONTROL: THE ROLE OF BIOLOGICAL SUBTYPES

ER NEGATIVE AND HER2 OVEREXPRESSING CANCERS HAVE THE HIGHEST RISK OF LOCAL RECURRENCE

THIS PATTERN PERSISTS EVEN WHEN POSTMASTECTOMY RT IS GIVEN

IN THE PRESENCE OF PMRT, ALTHOUGH RT REDUCED THE RISK OF LR IN ALL GROUPS, RATES OF LOCAL RECURRENCE

VOLUME 26 · NUMBER 9 · MARCH 20 2008

JOURNAL OF CLINICAL ONCOLOGY

Estrogen Receptor, Progesterone Receptor, HER-2, and Response to Postmastectomy Radiotherapy in High-Risk Breast Cancer: The Danish Breast Cancer Cooperative Group

Marianne Kyndi, Flemming B. Sørensen, Helle Knudsen, Marie Overgaard, Hanne Melgaard Nielsen, and Jens Overgaard



LOCAL CONTROL: THE ROLE OF BIOLOGICAL SUBTYPES

OF THE SURGICAL PROCEDURE IS SUPPORTED BY SOME RETROSPECTIVE STUDIES COMPARING OUTCO

LOCAL RECURRENCE RATES WERE OBSERVED BETWEEN THE BCT AND MASTECTOMY GROUPS (HO ET A

STICALLY SIGNIFICANT IMPROVEMENT IN 5-YEAR LOCAL RECURRENCE-FREE SURVIVAL FOR PATIENTS

Favorable Prognosis in Patients With T1a/T1bN0 Triple-Negative Breast Cancers Treated With Multimodality Therapy

Alice Y. Ho, MD¹; Gaorav Gupta, MD, PhD¹; Tari A. King, MD²; Carmen A. Perez, MD¹; Sujata M. Patil, PhD³;
Katherine H. Rogers, BA¹; Yong Hannah Wen, MD, PhD⁴; Edi Brogi, MD, PhD⁴; Monica Morrow, MD²; Clifford A. Hudis, MD⁵;
Tiffany Traina, MD⁵; Beryl McCormick, MD¹; Simon N. Powell, MD, PhD¹; and Mark E. Robson, MD⁵

Cancer 2012

Ann Surg Oncol (2011) 18:3164-3173
DOI 10.1245/s10434-011-1920-z

Annals of
SURGICAL ONCOLOGY
OFFICIAL JOURNAL OF THE SOCIETY OF SURGICAL ONCOLOGY

ORIGINAL ARTICLE – AMERICAN SOCIETY OF BREAST SURGEONS

Triple-Negative Breast Cancer Is Not a Contraindication for Breast Conservation

Farrell C. Adkins, MD¹, Ana Maria Gonzalez-Angulo, MD², Xiudong Lei, PhD³, Leonel F. Hernandez-Aya, MD²,
Elizabeth A. Mittendorf, MD¹, Jennifer K. Litton, MD², Jamie Wagner, DO¹, Kelly K. Hunt, MD¹,
Wendy A. Woodward, MD, PhD⁴, and Funda Meric-Bernstam, MD¹

VOLUME 29 · NUMBER 21 · JULY 20 2011

JOURNAL OF CLINICAL ONCOLOGY

Increased Risk of Locoregional Recurrence for Women With T1-2N0 Triple-Negative Breast Cancer Treated With Modified Radical Mastectomy Without Adjuvant Radiation Therapy Compared With Breast-Conserving Therapy

Bassam S. Abdulkarim, Julie Cuartero, John Hanson, Jean Deschênes, David Lesniak, and Siham Sabri



THE IMPACT OF SYSTEMIC THERAPIES ON LOCAL CONTROL

EFFECTIVE ADJUVANT SYSTEMIC THERAPY HAS A MAJOR IMPACT ON LOCAL TREATMENT OUTCOMES
SYSTEMIC THERAPY THAT RESULT IN A SURVIVAL BENEFIT APPEAR TO RESULT IN A PARALLEL REDUCTION
TRASTUZUMAB TO CHEMOTHERAPY IN HER2 POSITIVE WOMEN IN NSABP B31 REDUCED THE RATE OF LOC

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Trastuzumab plus Adjuvant Chemotherapy for Operable HER2-Positive Breast Cancer

Edward H. Romond, M.D., Edith A. Perez, M.D., John Bryant, Ph.D.,
Vera J. Suman, Ph.D., Charles E. Geyer, Jr., M.D., Nancy E. Davidson, M.D.,
Elizabeth Tan-Chiu, M.D., Silvana Martino, D.O., Soonmyung Paik, M.D.,
Peter A. Kaufman, M.D., Sandra M. Swain, M.D., Thomas M. Pisansky, M.D.,
Louis Fehrenbacher, M.D., Leila A. Kutteh, M.D.,
Victor G. Vogel, M.D., Daniel W. Visscher, M.D., Greg Yothers, Ph.D.,
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Eleftherios P. Mamounas, M.D., M.P.H., Wilma L. Lingle, Ph.D.,
Pamela M. Klein, M.D., James N. Ingle, M.D., and Norman Wolmark, M.D.

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Surgical Margins in Lumpectomy for Breast Cancer — Bigger Is Not Better

Monica Morrow, M.D., Jay R. Harris, M.D., and Stuart J. Schnitt, M.D.



THE IMPACT OF SYSTEMIC THERAPIES ON LOCAL CONTROL

**“AS THE EFFECTIVENESS OF OTHER THERAPIES INCREASES,
THE EXTENT OF SURGERY MAY BE DECREASED AND
EXCELLENT LOCAL CONTROL IS STILL MAINTAINED...**

...BIGGER SURGERY DOES NOT OVERCOME BAD BIOLOGY”

Personalizing extent of breast cancer surgery according to molecular subtypes

Monica Morrow*

The Breast 22 (2013) S106–S109



THE IMPACT OF SYSTEMIC THERAPIES ON LOCAL CONTROL

“SYSTEMIC THERAPIES HAVE A POWERFUL IMPACT ON LOCAL DISEASE CONTROL AND RISK OF LOCAL RECURRENCE IS RELATED TO THE BIOLOGICAL AGGRESSIVENESS OF THE TUMOR AS REFLECTED IN TUMOUR SUBTYPE, NOT THE EXTENT OF SURGERY”

Over surgery in breast cancer

Fiona MacNeill ^{a,*}, Andreas Karakatsanis ^b

The Breast 31 (2017) 284–289



EJSO 42 (2016) 1636–1641

Review

Should patients with early breast cancer still be offered the choice of breast conserving surgery or mastectomy?

N. Johns, J.M. Dixon*

Edinburgh Breast Unit, Western General Hospital, Edinburgh, EH4 2XU, UK





G.RE.T.A.





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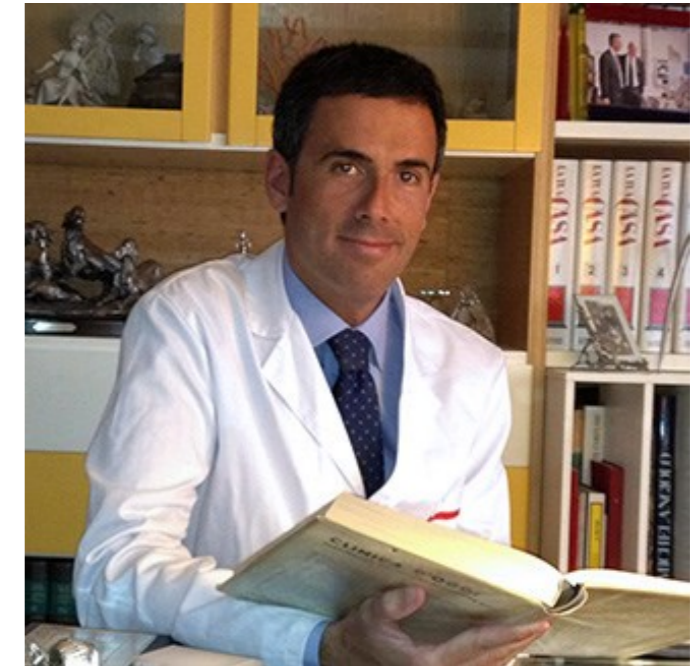
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