



National Comprehensive
Cancer Network®

Surgical Management of Invasive Breast Cancer with SABCS Updates

Meghan R. Flanagan, MD, MPH

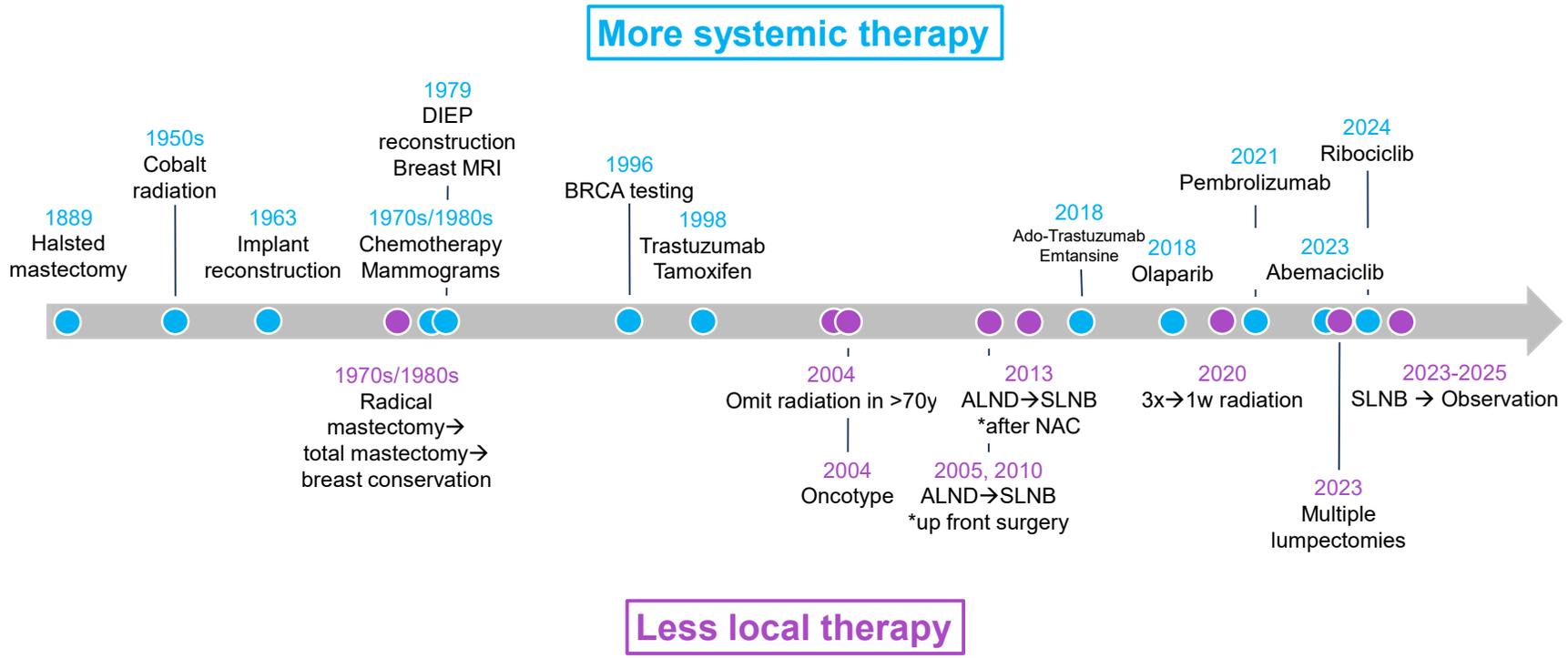
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San Antonio Updates

- Neoadjuvant endocrine therapy (ALTERNATE)
- Omission of sentinel lymph node biopsy (BOOG 2013-08)
- Sentinel lymph node biopsy after NAC (AXSANA)

Evolution of Breast Cancer Treatment



Breast Surgery Trials

Trial	Patients	Mean follow up (years)	Distant Recurrence		OS
	N=5335		Mtx	BCT	
NSABP B-06	2163	20	22%	L 25% L+R 26%	NS
Milan	701	20	24%	23%	NS
NCI	237	18	23%	25%	NS
IGR	179	15	20%	13%	NS
Danish	1153	20	19%	26%	NS
EORTC 10801	902	20	43%	47%	NS

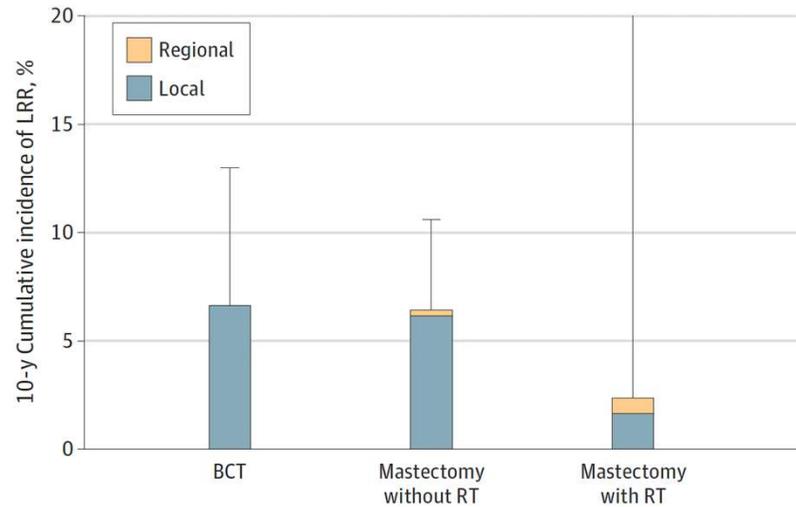
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Fisher B, N Engl J Med. 2002;347:1233–41; Veronesi U, N Engl J Med. 2002;347:1227–32; Jacobson JA, N Engl J Med. 1995;332:907–11; Poggi MM, Cancer. 2003;98:697–702; Arriagada R, Ann Oncol. 2003;14:1617–22; Blichert-Toft M, Acta Oncologica. 2008;47:672–81.

Contemporary Locoregional Recurrence Data

Young Women's Breast Cancer Study



Breast Surgery Trials

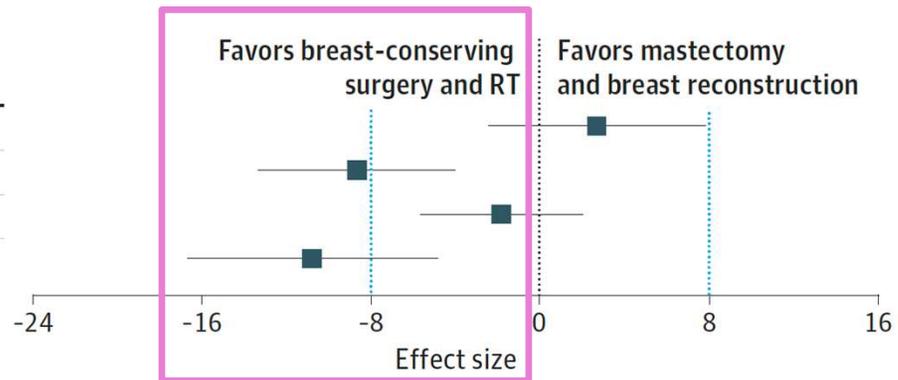
KEY TAKEAWAYS

- Similar locoregional recurrence
- No association between type of breast surgery and survival

Breast Surgery – Patient Reported Outcomes

Texas Cancer Registry
 Stage 0-II breast cancer, 2006-2008
 Median time after surgery 10 years

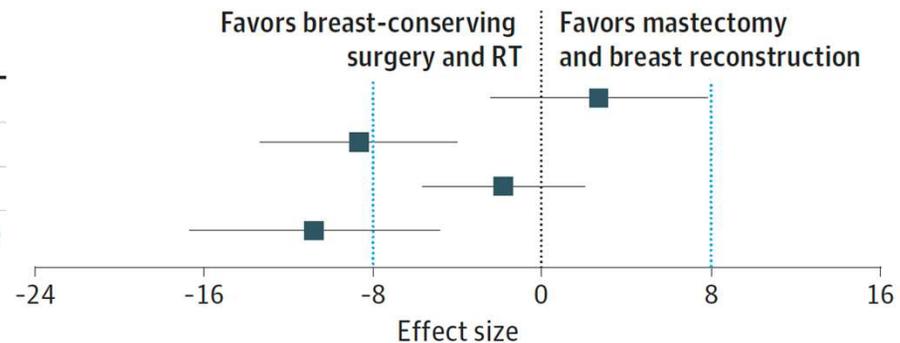
Variable	Effect size (95% CI)
Satisfaction with breasts	2.71 (-2.45 to 7.88)
Psychosocial well-being	-8.61 (-13.26 to -3.95)
Physical well-being	-1.8 (-5.65 to 2.05)
Sexual well-being	-10.68 (-16.60 to -4.76)



Breast Surgery Trials – Patient Reported Outcomes

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How can we do more breast conserving surgery?

Neoadjuvant Endocrine Therapy

What do we know?

- Most studies in postmenopausal women
- Rare pathologic complete response (pCR)
- Residual disease not a clear indication to change adjuvant treatment

Neoadjuvant Endocrine Therapy

Trial	Intervention	Patients	BCS Eligible
P-024	4 months Letrozole vs. Tamoxifen	337 Postmenopausal HR+ Ineligible for BCS	Letrozole 45% Tam 35%
IMPACT	3 months Anastrozole vs. Tamoxifen vs. both	124 Postmenopausal HR+ Mastectomy only	Anastrozole 46% Tam 22%
PROACT	3 months Anastrozole vs. Tamoxifen	386 Postmenopausal HR+ Mastectomy/Inoperable	Anastrozole 43% Tam 31%
Z1031	4 months Letrozole vs. Anastrozole vs. Exemestane	159 Postmenopausal HR+ Mastectomy only	Letrozole 48% Anastrozole 47% Exemestane 64%

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Eiermann W, Ann Oncol 2001; Smith IE, J Clin Oncol 2005; Cataliotti L, Cancer 2006.

Neoadjuvant Endocrine Therapy

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Z1031	4 months Letrozole vs. Anastrozole vs. Exemestane	159 Postmenopausal HR+ Mastectomy only	Letrozole 48% Anastrozole 47% Exemestane 64%
ALTERNATE	5 months Anastrozole vs. Fulvestrant vs. both *adjuvant ctx non-zero mPEPI	1473 Postmenopausal HR+ 26% mastectomy/inoperable	44% of mastectomy only patients underwent BCS

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Eiermann W, Ann Oncol 2001; Smith IE, J Clin Oncol 2005; Cataliotti L, Cancer 2006; Leitch M, SABCs 2025.

Case Discussion

**72 year old female with palpable intermediate grade invasive ductal carcinoma
ER+ PR- HER2-, Ki67 15%**

- Diagnostic imaging
 - mmg – 30 mm mass lower inner quadrant
 - U/S – 7N2, 27mm mass closely approximating but not involving overlying skin; negative axillary ultrasound
- Patient strongly prefers breast conservation with consideration for symmetry
- B/C cup with grade 2 ptosis

Case Discussion: Polling Question

What would be your next step in management of the breast?

- A. Upfront surgery with breast conserving surgery
- B. Send oncoprote for consideration of neoadjuvant chemotherapy
- C. Upfront surgery bilateral oncoplastic reduction
- D. Neoadjuvant endocrine therapy

Neoadjuvant Endocrine Therapy

KEY TAKEAWAYS

- 5 RCTs comparing different types of neoadjuvant endocrine therapy (1,000s of patients!) with ~30-40% conversion from mastectomy to breast conservation
 - Similar to NAC for HR+
- Increase consideration for NET to improve cosmesis and increase BCT
 - Also provides information about tumor response
 - Also provides data about adherence

Axillary Management

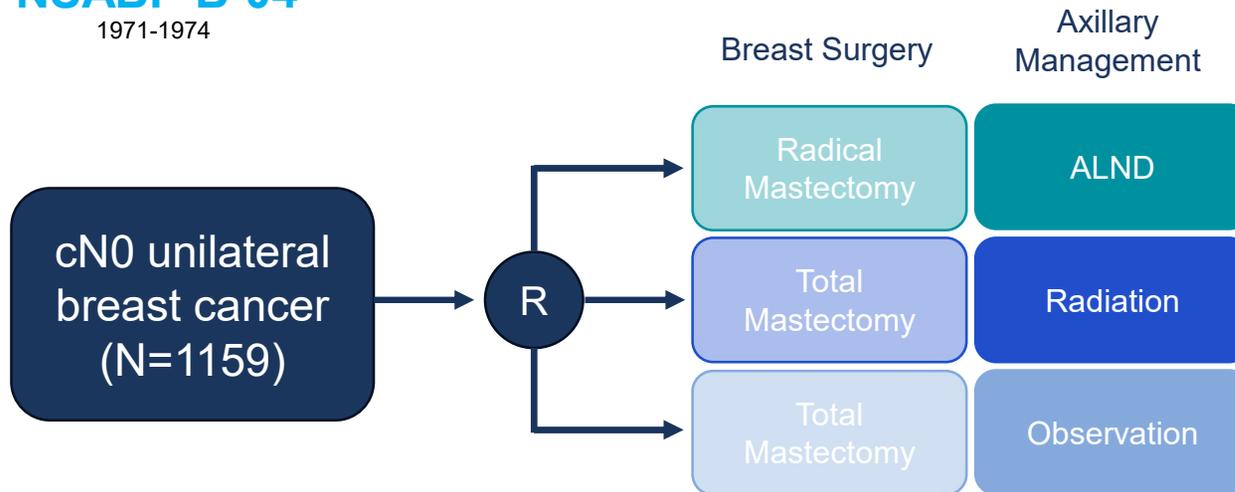
**NSABP B-04
Kings/Cambridge**
ALND for local
control and staging
*no improvement in survival



Axillary Lymph Node Dissection

NSABP B-04

1971-1974



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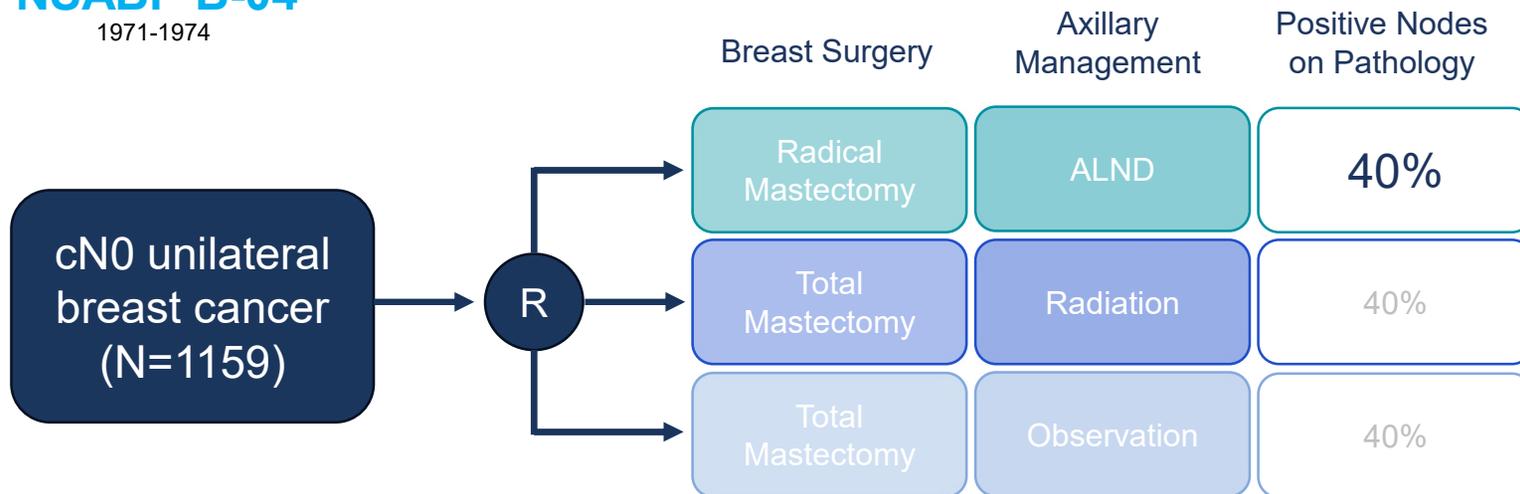
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Fisher B, N Engl J Med, 2002;347(8):567-575

Axillary Lymph Node Dissection

NSABP B-04

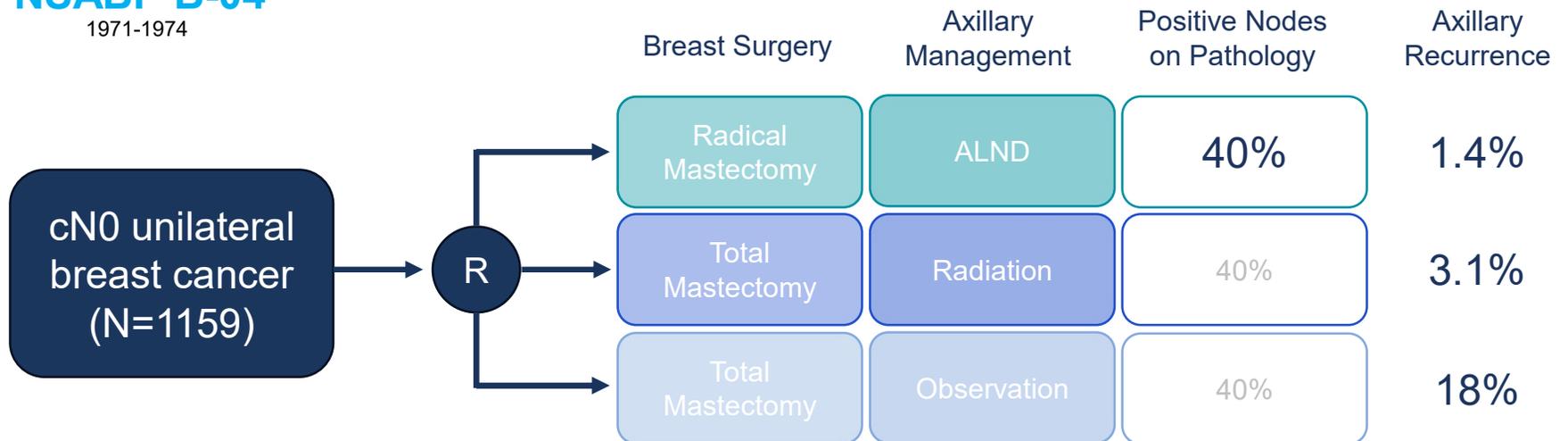
1971-1974



Axillary Lymph Node Dissection

NSABP B-04

1971-1974



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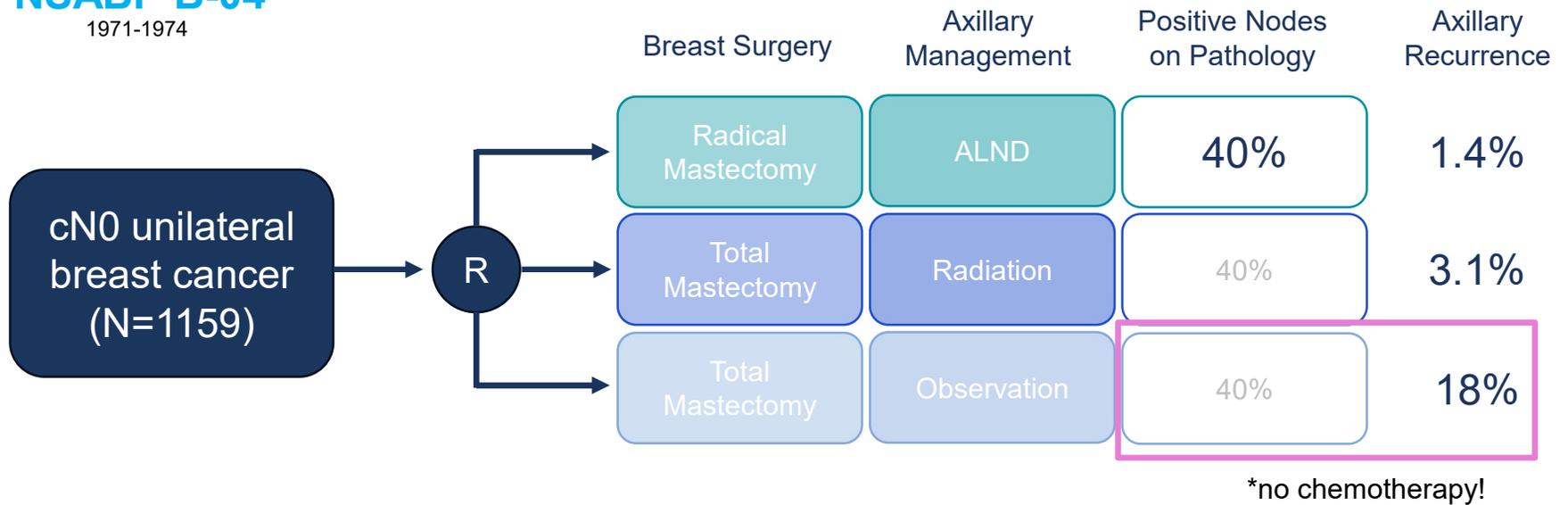
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Axillary Lymph Node Dissection

NSABP B-04

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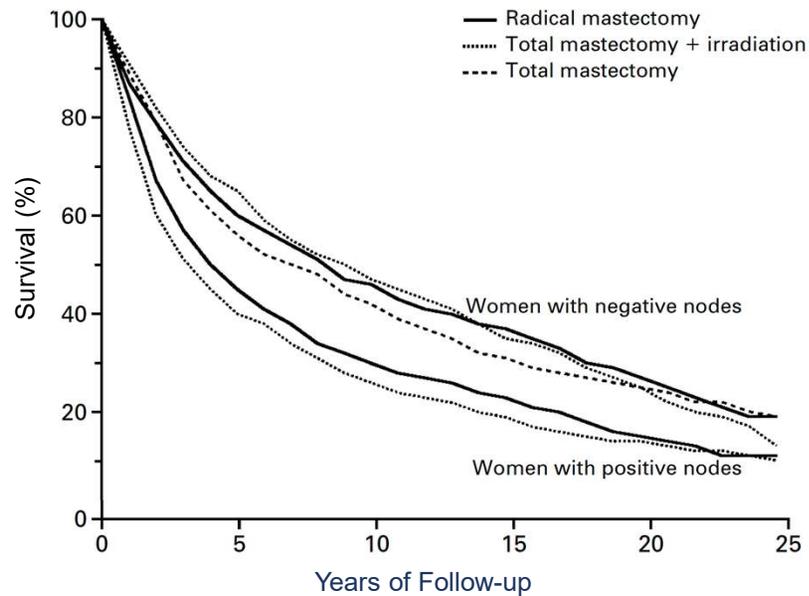
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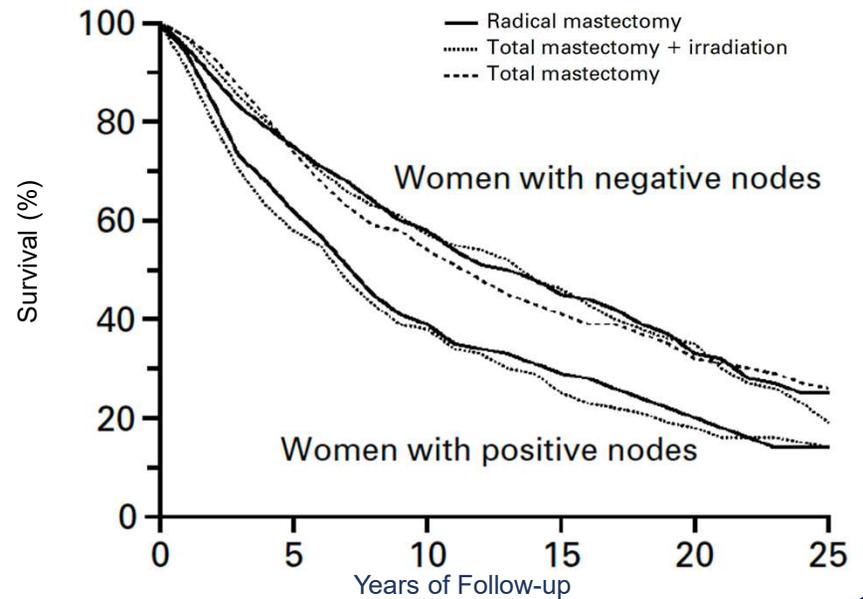
Axillary Lymph Node Dissection

NSABP B-04

Disease Free Survival



Overall Survival



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Axillary Lymph Node Dissection

NSABP B-04

TO THE CRITICS:

They believe that axillary dissection in all women with clinically negative axillary nodes is justified. Their thesis may have merit in terms of achieving local control of disease;

however, our data indicate that leaving positive nodes unremoved did not significantly increase the rate of distant recurrence or breast-cancer–related mortality

Axillary Lymph Node Dissection

NSABP B-04

KEY TAKEAWAYS

- No survival benefit with axillary lymph node dissection
- Radiation reduced risk of axillary (and local) recurrence but did not impact survival
- 40% of cN0 had positive nodes but less than half had an axillary recurrence

Axillary Management

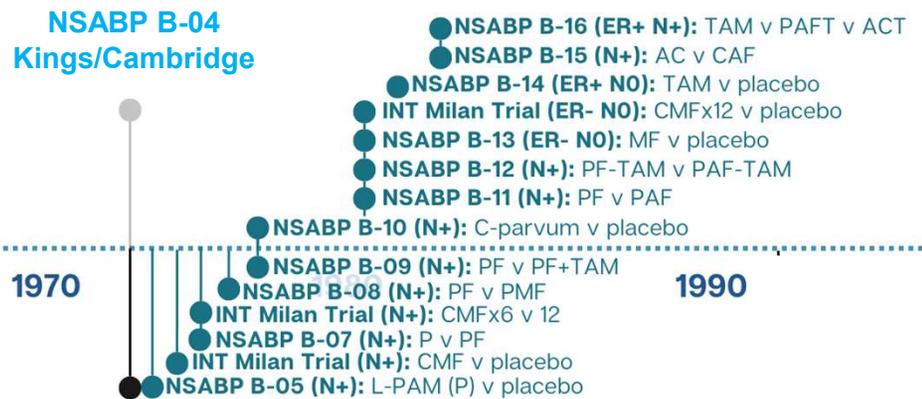
NSABP B-04
Kings/Cambridge
ALND for local
control and staging
*no improvement in survival

WHAT HAPPENED??



Milan Trial Published 2003
NSABP B-32 Published 2010
SLNB for cN0/pN0

Axillary Management



Systemic chemotherapy trials required axillary lymph node dissection for staging

Axillary Lymph Node Dissection

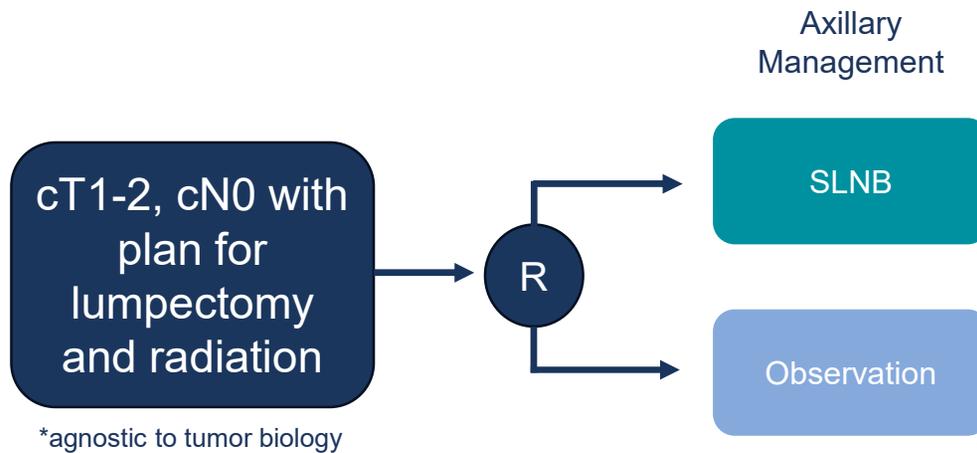
**NSABP B-04
Kings/Cambridge**
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1998 2004
Trastuzumab Oncotype
Tamoxifen



Sentinel Node Omission Trials

SOUND, INSEMA, BOOG 2013-08



Sentinel Node Omission Trials

	SOUND 2012-2017 N=708	INSEMA 2015-2019 N=3896	BOOG 2013-08 2015-2022 N=1572
Age (Median [IQR])	60	62	61
cT1	100%	90%	83%
cT2		10%	17%
Invasive ductal carcinoma	78%	73%	87%
Grade 1	28%	38%	28%
Grade 2	54%	59%	54%
Grade 3	19%	4%	17%
HR +	92%	95%	86%

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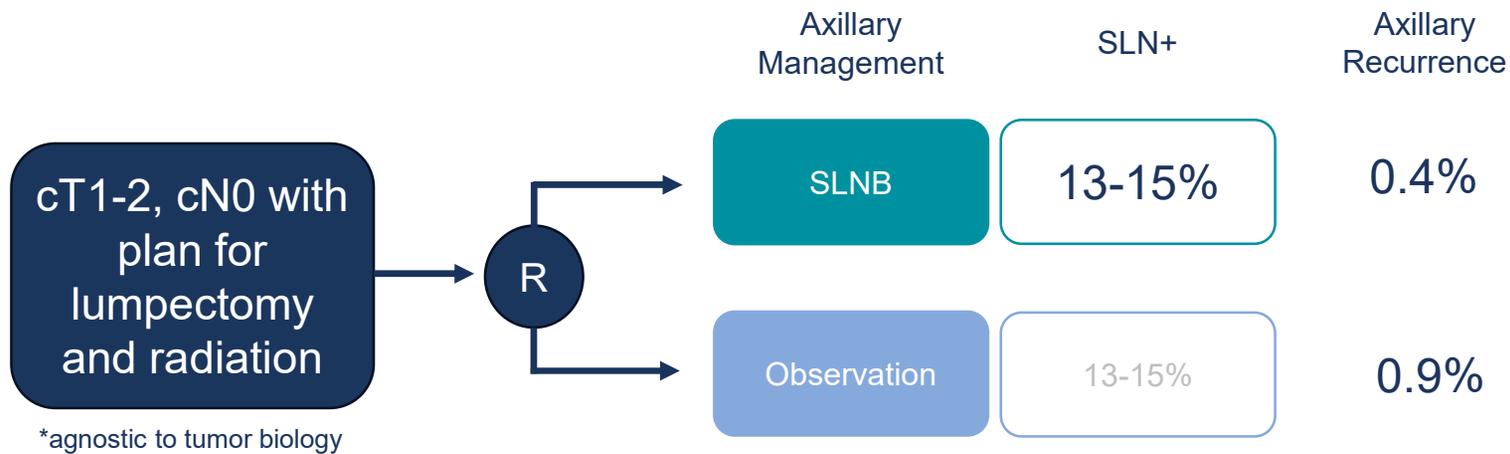
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Invasive ductal carcinoma	78%	73%	87%
Grade 1	28%	38%	28%
Grade 2	54%	59%	54%
Grade 3	19%	4%	17%
HR + (will receive endocrine therapy)	92%	95%	86%

Sentinel Node Omission Trials

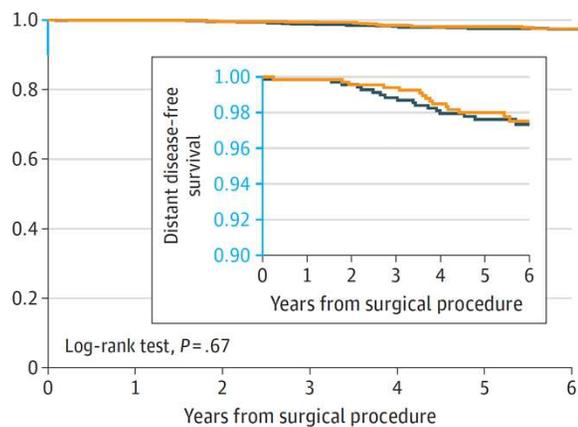
SOUND, INSEMA, BOOG 2013-08



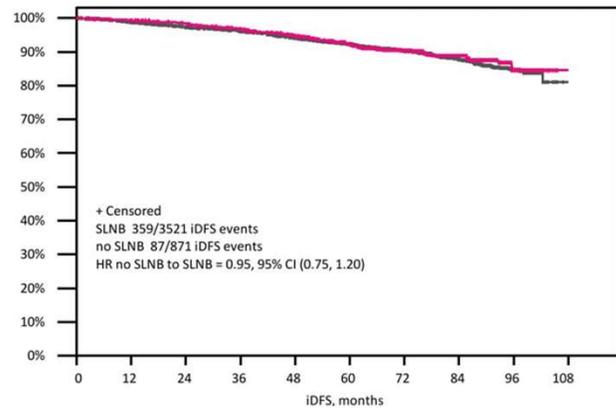
*agnostic to tumor biology

Sentinel Node Omission Trials

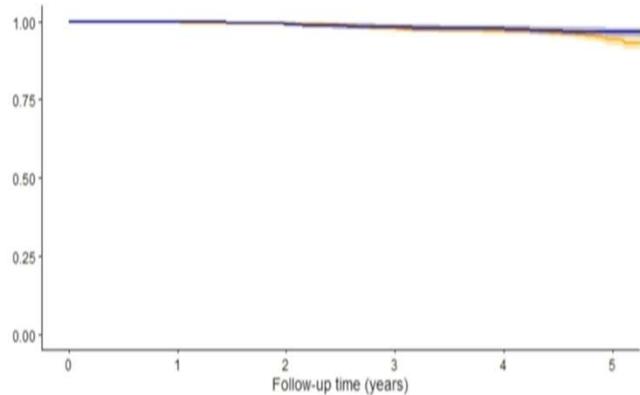
SOUND
5y DDFS



INSEMA
5y iDFS



BOOG 2013-08
5y RRFS



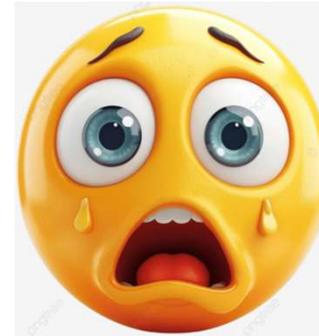
Sentinel Node Omission Trials

Surgical Oncologists



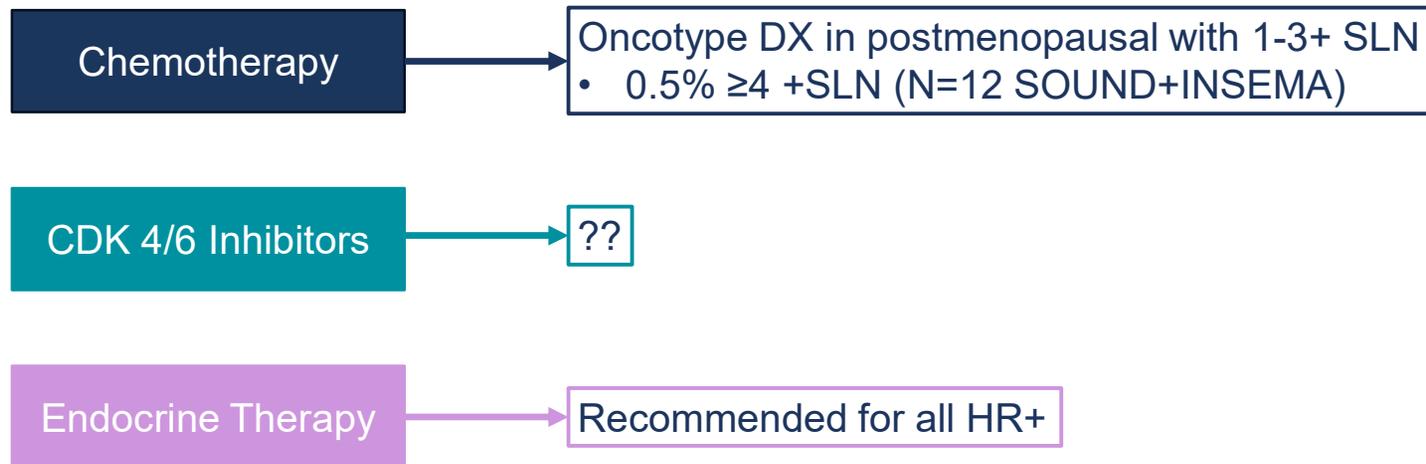
Less morbidity
Eliminate lymphedema
Does not impact cancer outcomes (@5 years)

Medical Oncologists



Less information about staging and prognosis
Less information directing systemic treatment
Concern about undertreatment

Systemic Considerations with SLN Omission



Systemic Considerations with SLN Omission

	monarchE N=5637	NATALEE N=5101
CDK 4/6i	Abemaciclib	Ribociclib
Study population	Stage IB-III Node positive, high risk N1mi/N1 + Grade 3 and/or $\geq 5\text{cm}$, N2/3	Stage II-III Any node positive N0 + Grade 2 + Ki67 $\geq 20\%$ or high genomic risk or Grade 3
Duration	2 years	3 years
FDA Approval	October 2021	September 2024

Systemic Considerations with SLN Omission

	SOUND 2012-2017 N=1405	INSEMA 2015-2019 N=4858	BOOG 2013-08 2015-2022 N=1572	Kandzi 2014-2022 N=948
Age (Median [IQR])	60	62	61	63
cT1	100%	90%	83%	100%
cT2		10%	17%	
Invasive ductal carcinoma	78%	73%	87%	79%
Grade 1	28%	38%	28%	26%
Grade 2	54%	59%	54%	74%
Grade 3	19%	4%	17%	
HR +	92%	95%	86%	99%
Surgery				
■ BCS	100%	100%	100%	83%
■ Mastectomy				17%

Systemic Considerations with SLN Omission

	SOUND 2012-2017 N=708	INSEMA 2015-2019 N=3896	BOOG 2013-08 2015-2022 N=748	Kandzi 2014-2022 N=948
Sentinel lymph node positive	13.7%	15%	13.7%	15%
pN1mi	5.1%	3.5%	6%	4%
pN1+	8.6%	11.6%	7.7%	11%

Systemic Considerations with SLN Omission

	SOUND 2012-2017 N=708	INSEMA 2015-2019 N=3896	BOOG 2013-08 2015-2022 N=748	Kandzi 2014-2022 N=948
Sentinel lymph node positive	13.7%	15%	13.7%	15%
pN1mi	5.1%	3.5%	6%	4%
pN1+	8.6%	11.6%	7.7%	11%
≥4 nodes	N=4	N=8	NR	N=4

Systemic Considerations with SLN Omission

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9 patients need SLNB to find 1 pN+
291 patients need SLNB to prevent one recurrence*

Guideline Updates

ASCO, April 2025

Recommendation

1.1. SLNB can be omitted for select patients with a small (≤ 2 cm) breast cancer and a negative finding on preoperative ALN ultrasound and who fulfill all of the following criteria and for whom the detection of metastatic sentinel lymph node(s) would not change treatment recommendations:^a

postmenopausal and ≥ 50 years

unifocal invasive ductal carcinoma smaller than or equal to 2 cm

Nottingham grades 1 to 2

hormone receptor-positive, HER2-negative in patients intending to receive adjuvant endocrine therapy

no suspicious lymph nodes on axillary US or only one suspicious node and biopsy is benign and concordant with axillary US findings

undergoing upfront breast conservation surgery followed by whole breast radiation in patients < 65 years of age

NCCN 1.2026

Based on emerging data from the SOUND trial, patients with HR+ /HER2- tumors, pT1, N0 (node negative by axillary ultrasound), may be considered for omission of SLN biopsy.

Case Discussion

**66 year old female with screen-detected intermediate grade invasive ductal carcinoma
ER+ PR+ HER2-, Ki67 75%**

Imaging:

- Screen – focal asymmetry upper outer quadrant
- Diagnostic
 - mmg – 17mm mass
 - U/S – 2N4, 14mm mass; negative axillary ultrasound

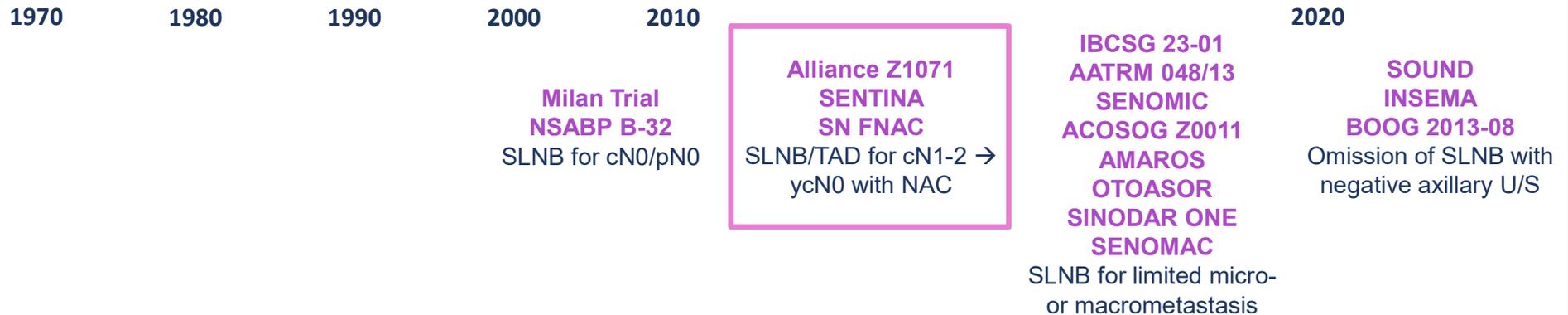
Case Discussion: Polling Question

What would you recommend for axillary management?

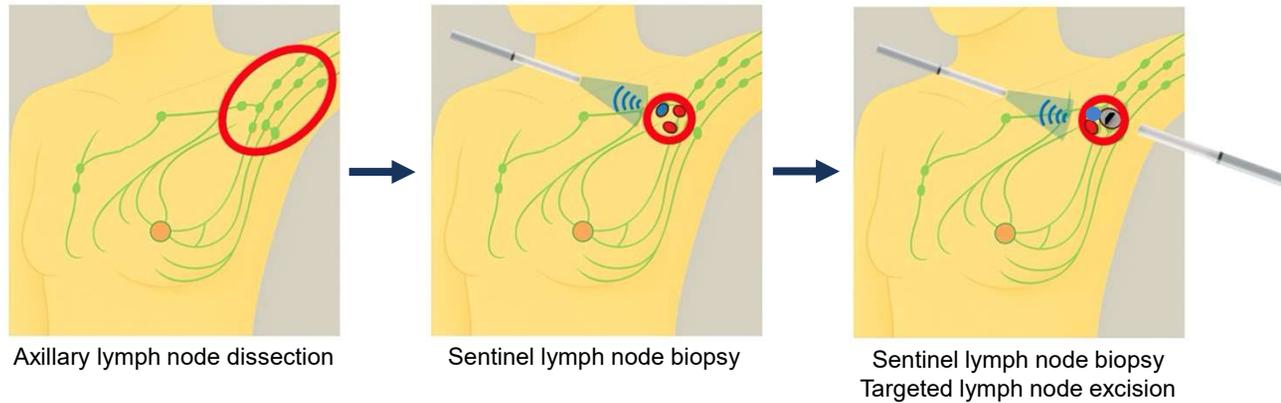
- A. Sentinel lymph node biopsy
- B. Omission of sentinel lymph node biopsy regardless of type of breast surgery
- C. Omission of sentinel lymph node biopsy, but only if breast conserving surgery
- D. Omission of sentinel lymph node biopsy, but only if mastectomy

Axillary Management

NSABP B-04
Kings/Cambridge
ALND for local control and staging
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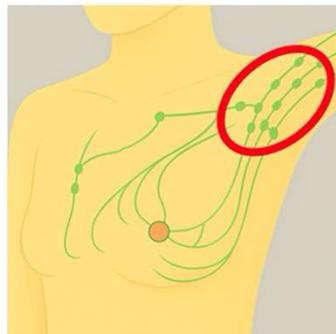
Sentinel Lymph Node Biopsy in cN1+ → ycN0



Outcome data comparing different techniques is limited
Very limited data on cN3

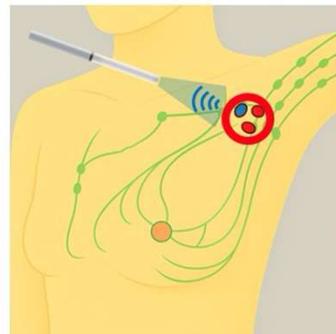
Sentinel Lymph Node Biopsy in cN1+→ycN0

AXSANA International prospective study of different staging procedures after neoadjuvant chemotherapy (cN1-3a→ycN0)



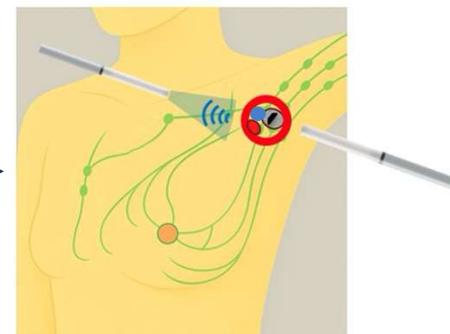
Axillary lymph node dissection

N=799



Sentinel lymph node biopsy

N=419

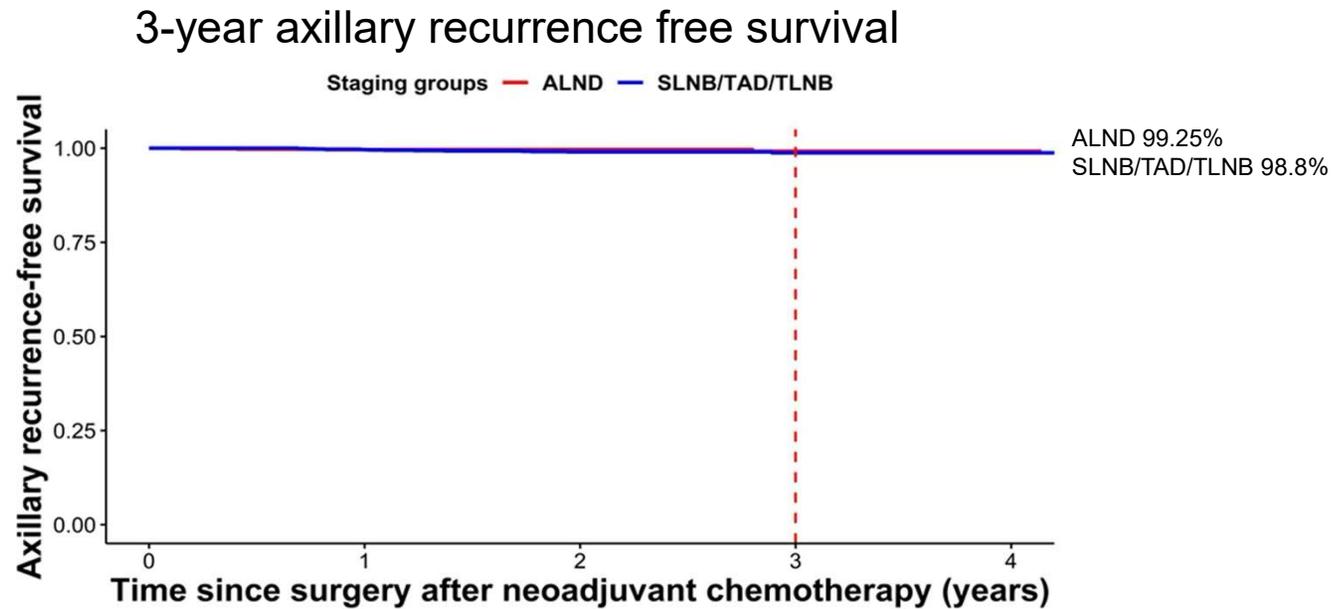


Sentinel lymph node biopsy
Targeted lymph node excision

N=1414

Sentinel Lymph Node Biopsy in cN1+→ycN0

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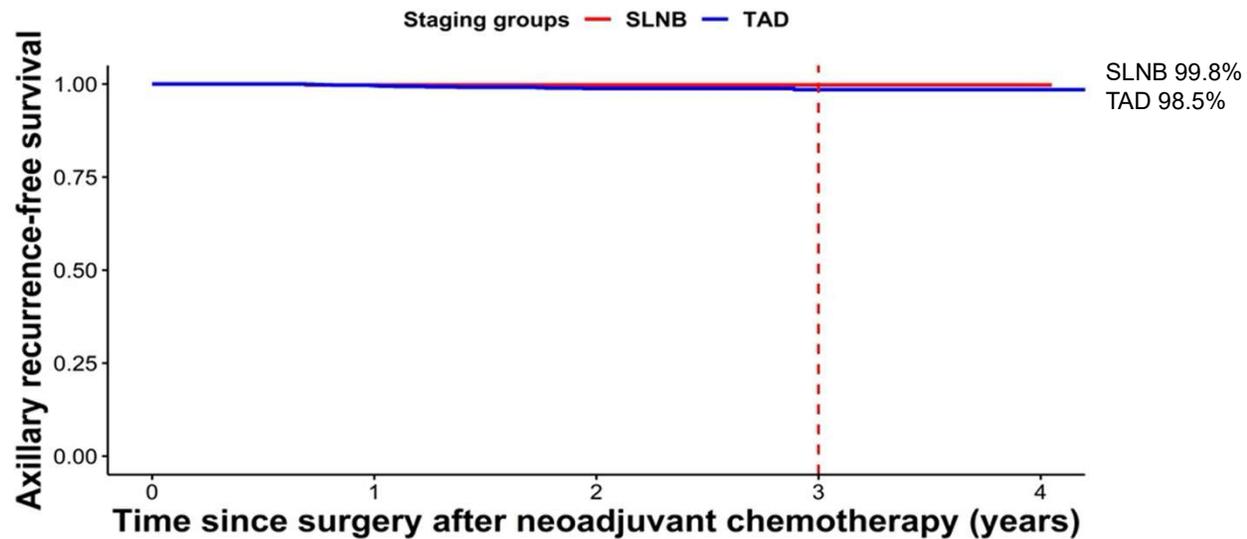


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Sentinel Lymph Node Biopsy in cN1+→ycN0

AXSANA International prospective study of different staging procedures after neoadjuvant chemotherapy (cN1-3a→ycN0)

3-year axillary recurrence free survival



Fred Hutchinson Cancer Center

Sentinel Lymph Node Biopsy in cN1+→ycN0

AXSANA International prospective study of different staging procedures after neoadjuvant chemotherapy (cN1-3a→ycN0)

- SLNB/TAD/TLNB non-inferior to ALND following NAC @ 3y
- No differences observed between node biopsy techniques
- Higher initial risk associated with more distant recurrences but not regional failures

Take Home Points

1. Consider utilization of neoadjuvant endocrine therapy to optimize/achieve breast conservation outcomes
2. Omission of sentinel lymph node biopsy increasingly supported by evidence in postmenopausal, HR+/HER2- patients with cT1-2 cN0 tumors
3. AXSANA study increases cohort of cN+→ycN0 patients potentially eligible for SLNB after neoadjuvant chemotherapy without apparent superiority of one procedure type



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An alliance of leading cancer centers devoted to patient care, research, and education

Our Mission

To define and advance quality, effective, equitable, and accessible cancer care and prevention so all people can live better lives

Our Vision

Access to high-quality, high-value, patient-centered cancer care for all people globally



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[NCCN.org/patients](https://www.nccn.org/patients) – For Patients

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