



CIBC 2019

Management of the Axilla for Newly Diagnosed Breast Cancer Patients AJCC Tumor Staging

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Chicago International Breast Conference
November 1-3, 2019



Chicago International Breast Course
The Westin Chicago River North
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OUTLINE

- Management of the axillary nodes
 - Surgery first approach
 - Neoadjuvant setting
 - Role of preoperative axillary U/S
- AJCC Tumor Staging



Disclosures

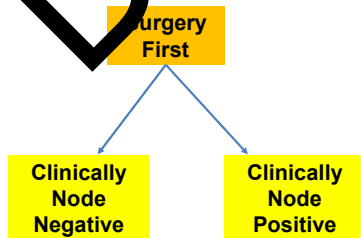
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Axillary Nodes with Surgery First Approach



Surgery First Setting



Surgery First Setting

- Clinically node negative (cN0)
 - SNB alone for both lumpectomy and mastectomy
 - No need for completion ALND even if the SN is tumor positive
 - Z011
 - IBCSG
 - AMAROS

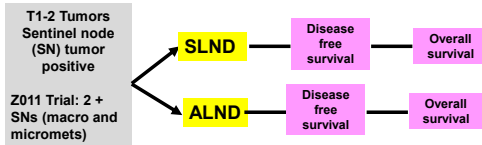




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2011 Trial



NO DIFFERENCE IN DFS OR OS BETWEEN SLND AND ALND

Giuliano et al, Ann Surg 2010;252(3):426
Giuliano et al, JAMA 2011;305(6):569



Tumor Positive SNs RCTs

Trial	Axillary Recurrence at 5-6yrs	DFS	OS
Z011	SN arm: 0.9% ALND arm: 0.5%	No difference	No difference
IBCSG	SN arm: 0.8% ALND arm: 0.2%	No difference	No difference
AMAROS	ALND arm: 0.43% XRT arm: 1.19%	No difference	No difference

Giuliano et al, Ann Surg 2010;252(3):426
Giuliano et al, JAMA 2011;305(6):569
Galimberti V et al Lancet 2013;14:297



Tumor Positive SNs Randomized Trials for Mastectomy

Trials	#Mastectomies	Axillary Recurrences at 5 yrs	DFS OS
IBCSG	9%	SN arm: 0.8% ALND arm: 0.2%	No difference
AMAROS	18%	ALND arm: 0.43% XRT arm: 1.19%	No difference

Galimberti V et al Lancet 2013;14:297
Donker et al Lancet Oncol 2014;15:1303



Trial Eligibility Criteria

Trial	Tumor size	No + nodes	Radiation to Axilla
Z011	Median 1.6-1.7 cm	58% had one + node	20% got nodal irradiation
IBCSG	68% <2.0cm	95% had one + node	70% rec'd whole breast xrt, 20% partial/intraop
AMAROS	82% were 0-2cm	75% had one + node	Yes

Galimberti V et al Lancet 2013;14:297
Donker et al Lancet Oncol 2014;15:1303
Giuliano et al JAMA 2011; 305:569



Sentinel Node Positive Patients Who Should Have ALND

- >3 + nodes
- Does not want radiation therapy
- Partial breast radiation therapy
- Larger tumor-5cm
- Gross extranodal extension
- Does not want systemic therapy (chemo, hormonal)



Ok to Omit ALND

- Triple negative patients
- Young patients
- Her2neu positive patients
- Macrometastases

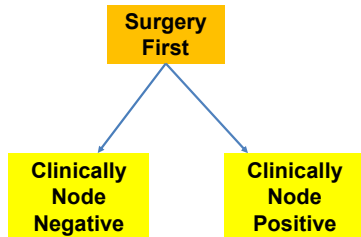




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Surgery First Setting



Clinically Node Positive

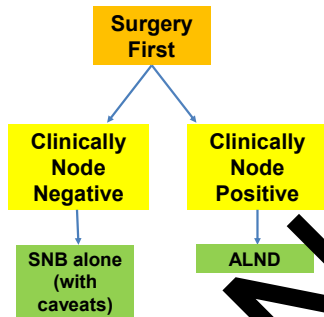
- cN1-→ ALND
 - May consider neoadjuvant therapy to downsize the nodes

pCR in the Nodes	ER+ Her2neu-	TNBC	HER2neu+
Z1071 Trial	21.1%	49.4%	64.7%

Boughey et al JAMA 2013;310:145



Surgery First Setting



Axillary Nodes and Neoadjuvant Chemotherapy (NAC)



Why Give Neoadjuvant Therapy?

- Shrink tumor or nodes
- Tumor response
- Clinical trial



Who gets Neoadjuvant Therapy?

- Triple Negative
 - All cases except T1 tumors?
- Her2neu +
 - All cases except T1 tumors?
- ER +-controversial
 - Low ER/PR positivity
 - High Ki67
 - Node positive
 - LVI
 - Grade III





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Feasibility of SNB in cN1 NAC Patients Clinical Trials

	Z1071	SN-FNAC	SENTINA
Year	2013	2015	2013
No pts	663	153	226
Overall (FN) rate	12%	13.4%	14.0%
FN rate with dual tracer	10.8%	5.2%	8.6%

Z1071 Trial

- FNR 9%
 - 3 or more nodes removed
 - Use both blue dye and lymphoscintigraphy


Boughey et al JAMA 2013



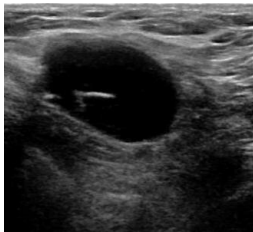
Axillary U/S Z1071

- 611 pts had axillary U/S after NAC
- 39% had pCR in the node
- Predictors of pCR in the nodes:
 - Cortical thickness >3mm-71% sensitivity
 - Loss of fatty hilum-81% sensitivity
 - Short axis diameter
 - Long axis diameter

Le-Petross et al AJR Am J Roentgenol 2018;210:669




“Clipped Node”



“Clipped Node”

- 170 pts in the Z1071 trial had a clip placed in the node
- Clip was retrieved in 141/170=83%
- Clipped node not amongst SNB in 24%
- If clip identified the FN rate was 6.8%
- If clip not identified FN was 19%


Boughey J et al, Ann Surg 2016;263:802



“Targeted Axillary Dissection”

- Targeted axillary dissection=SNB + “clipped node”
- Clipped node not amongst SNB in 23%
- FNR rate:
 - SNB alone=10.1%
 - Clipped node alone=4.2%
 - SNB+Clipped node (TAD)=2.0%

Caudle A et al, J Clin Oncol 2016;34:1072





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Wireless Technology to Localize Clips

Wire localization

"Wireless" localization

The diagram shows a breast with a wire inserted for localization. A blue arrow points to a breast with a clip inserted. Below the clip is a device with a screen showing '60' and a purple marker.

Neoadjuvant Therapy Setting

```

    graph TD
      A[Clinically Node Negative] --> B[Neoadjuvant Therapy]
      C[Clinically Node Positive] --> B
      B --> D[Clinically Node Negative]
      B --> E[Clinically Node Positive]
      D --> F[SNB alone, ALND only if SN+]
      E --> G[ALND]
  
```

SUMMARY

- What about if the SN after NAC is still tumor positive?

Alliance Trial for Neoadjuvant Patients with Positive SN

ALLIANCE A11202

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    graph TD
      A[Clinical T1-3 N1 M0 BC] --> B[Neoadjuvant Chemotherapy]
      B --> C[BCT or Mastectomy Sentinel Lymph Node Surgery]
      C --> D[SLN Negative]
      C --> E[SLN Positive]
      D --> F[Randomization]
      E --> F
      F --> G[ALND @ Breast/chest wall and nodal XRT]
      F --> H[No further axillary surgery. Breast/chest wall and nodal XRT]
  
```

Preoperative Axillary U/S

Meta-analysis of 31 studies, n=9,212 patients

- 50% sensitivity for tumor positive nodes
- 25% of pts with negative axillary U/S and biopsy still had metastases in their nodes at surgery

Diepstraten SC et al Ann Surg Oncol 2014;21:51

MSKCC Experience after Z011

```

    graph TD
      A[2,157 pts underwent a lumpectomy/SNB] --> B[287 pts with a tumor positive SN met clinical Z011 criteria]
      B --> C[242 (84%) pts didn't require completion ALND]
      B --> D[45 pts required an ALND (Extracapsular ext or >=3nodes +)]
  
```

Dengel et al Ann Surg Oncol 2014;21:22



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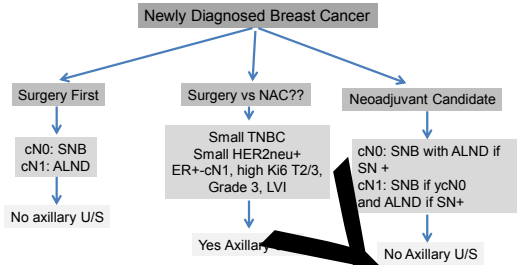
Reasons to Ultrasound the Axilla in a cN0 patient

- To determine if the pt is a neoadjuvant therapy candidate
 - High risk ER positive disease
 - cT1 triple negative or Her2neu positive tumors that feel larger on exam
- Abnormal nodes seen on preoperative MRI

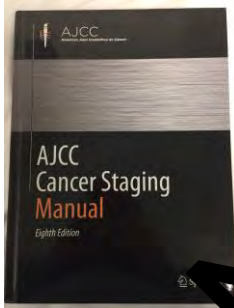


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OVERALL SUMMARY



TUMOR STAGING UPDATES



Tumor Staging

- Two clinical staging groups:
 - Anatomic-for when tumor markers are not available, T, N, M
 - Prognostic-T, N, M, ER/PR/HER2neu, grade
 - Based on populations of breast cancer patients that have been offered and treated with appropriate endocrine or systemic chemotherapy
 - Genomic tests-
 - When Oncotype <11, T1-2N0, ER+/HER2neu – then stage is prognostic Stage IA



Tumor Staging

- Pathologic prognostic groups
 - Based on pathologic findings at definitive surgery-size, nodes, ER/PR/HER2neu, grade, Oncotype
 - Not appropriate for patients undergoing neoadjuvant therapy
 - Rec'd by all tumor registries in the USA



Staging App



Breast Cancer Staging TNM 8

With permission of the AJCC
Integrated Cancer Research Limited

★★★★★ 4.9, 301 Ratings

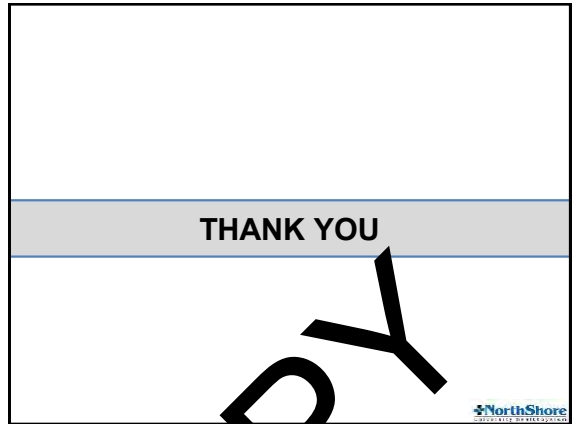
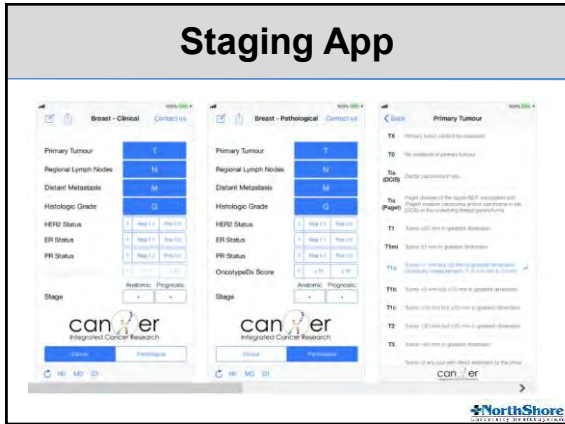
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