



# Comparing Overall Survival For Mastectomy with and without Axillary Lymphadenectomy in Sentinel-Node Positive Early Stage Breast Cancer

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## Background

- ACOSOG Z0011 was a randomized phase III trial initiated in 2005 which compared overall survival in patients who underwent sentinel lymph node biopsy (SLNB) alone to axillary lymph node dissection (ALND) in patients with T1-T2, undergoing breast conserving therapy (BCT) that were found to have 1-2 positive SLN. The 10-year overall survival (OS) in the SLN group was non-inferior to those in the ALND group.

## Aims

- To examine patterns of utilization for SLN+ early stage breast cancer and to determine the impact of ALND after mastectomy on OS.
- To replicate the Z0011 trial using the National Cancer Data Base (NCDB) to determine if this concept could be applied to patients who underwent mastectomy.

## Methods

- The NCDB was queried from 2010-2016 including all women with cT1-2N0M0 and 1-2 positive lymph nodes discovered via SLN biopsy who underwent mastectomy.
- Patients who received neoadjuvant systemic therapy were excluded.
- For the purposes of this query, ALND was defined as > 8 lymph nodes examined or removed.
- OS was defined as months from surgery.
- Descriptive statistics, univariate and multivariable Cox regression models, and Kaplan-Meier (KM) method were performed.

## Results

- A total of 6,888 eligible cases were included with a median follow-up of 34 months.
- The majority of the women were over the age of 60 (48%), white (86.2%), and had ER positive (83.3%) disease.
- The rates of ALND decreased over years, from 47% of cases in 2010 to 25% in 2016.
- KM analyses demonstrated 5-year OS of 76.2% and 77.0% (p=0.242) with or without ALND, respectively. (Figure 1)
- With performance of an ALND as the reference, SLN biopsy alone had a hazard ratio of 1.08 (95%CI = 0.95-1.24, p = 0.243) in the univariate analysis, and 1.12 (95%CI = 0.98-1.29, p = 0.106).

## Results

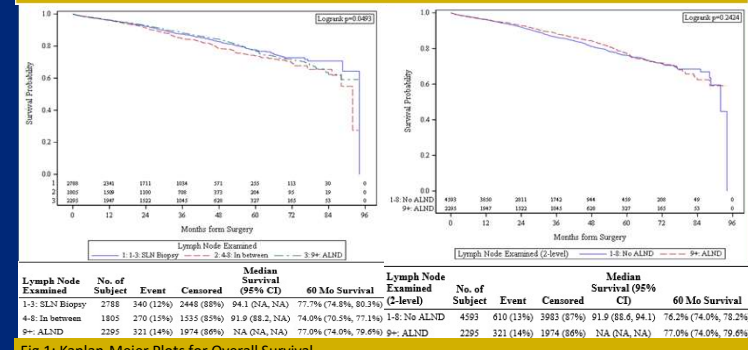


Fig 1: Kaplan-Meier Plots for Overall Survival

## Conclusions

- Patterns of care analyses show that axillary management based on Z0011 findings in BCT is being applied to mastectomy patients with fewer ALND for 1-2 positive SLN over the last 7 years.
- These changes in axillary management do not appear to compromise OS in patients who underwent mastectomy without ALND for +SLNB
- ALND is associated with serious adverse events and significant impact on quality of life.
- Application of ACOSOG Z0011 criteria to patients undergoing mastectomy may improve patient quality of life while not compromising OS., however, prospective studies of this approach are needed.