Local regional management of the axilla in node-positive breast cancer patients following neoadjuvant chemotherapy: an evaluation of real-world practice

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BACKGROUND/OBJECTIVE

- The optimal management of the axilla in node-positive breast cancer patients after neoadjuvant chemotherapy (NAC) remains unclear.
- As we await RCT results, little is known about how these patients are being treated in the real world
- The aim was to describe the treatment patterns of a cohort of breast cancer patients in Alberta who were node-positive at diagnosis and achieved a complete clinical response after NAC.
- For a subgroup of patients with pathologic persistent nodal disease, rates of completion ALND and recurrence were examined

METHODS

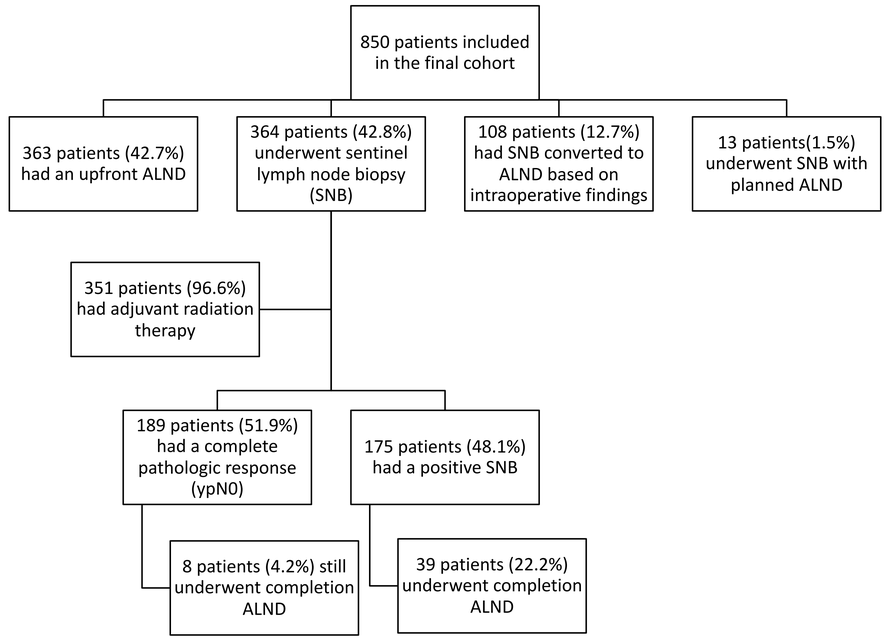
- All patients had biopsy-proven node-positive breast cancer and underwent NAC followed by surgery for breast cancer in Alberta between January 2016 and September 2021
- Patients were identified from the Synoptec operative database, which captures >90% of cancer surgeries in Alberta.
- Patients were considered to have a complete clinical response if they underwent SNB as their primary axillary surgery
- A manual chart review of ARIA, our provincial electronic medical record shared among all cancer centres in the province, was then performed to ascertain surgical pathology, adjuvant therapies (including completion ALND) and recurrence for these patients
- Descriptive statistics were used to outline the demographics, tumor characteristics, treatments undertaken and outcomes

RESULTS

- A total of 13,857 patients underwent surgery for breast cancer during the study period.
- Of those, 1492 had neoadjuvant therapy, and 911 of those had biopsy proven node-positive disease pre-operatively
- Median age of the cohort was 52
- Majority were treated by high-volume breast surgeons

Category		Frequency (%)
Age (median (IQR))		52 (44-60)
BMI	Normal	268 (31.53)
	Overweight	146 (17.18)
	Obese	116 (13.65)
	Underweight	12 (1.41)
	Unknown	308 (36.24)
Treatment Site	Calgary	377 (44.35)
	Edmonton	365 (42.94)
	Regional Site	108 (12.71)
Pre-NAC Primary Tumor Size	T1/T2	584 (68.71)
	T3/T4	177 (20.82)
	Tx/unknown/no primary	89 (10.47)
Post-NAC Primary Tumor Size	T1/T2	425 (50%)
	T3/T4	15 (1.76%)
	Tx/unknown/no primary	410 (48.24)
Primary Tumor Location	Peripheral	742 (87.29)
	Retroareolar	100 (11.76)
	Unknown	8 (0.94)
Primary Tumor Focality	Unifocal	577 (67.88)
	Multifocal	220 (25.88)
	Inflammatory carcinoma	31 (3.65)
	Involvement of skin or chest wall	18 (2.12)
	Unknown	4 (0.47)
Hormone Receptor Status	ER/PR Positive	395 (46.47)
	HER2 Positive	248 (29.18)
	Triple Negative	163 (19.18)
	Unknown	44 (5.18)
Primary Breast Surgery	BCS	323 (38.0)
	Unilateral Mastectomy	373 (43.88)
	Bilateral Mastectomy	150 (17.65)
	Mastectomy and BCS	4 (0.47)

Table 1. Cohort demographics



- Of the 175 patients who had a positive SNB, 33 (18.8%) had a recurrence
- Median follow-up was 17 months
- Of those who recurred, the majority developed distant disease (87.9%)
- 3 patients had an isolated local breast/chest wall recurrence and only 1 had a regional recurrence in the lymph nodes
- Of the 7 patients who developed any regional recurrent disease, 4 had undergone completion ALND

CONCLUSIONS

- There is heterogeneity in the surgical management of the axilla for breast cancer patients after NAC in Alberta
- Omission of dissection did not result in increased regional recurrence within our provincial cohort.