

THE EVOLVING LANDSCAPE OF AXILLARY LYMPH NODE DISSECTION IN BREAST CANCER: A POPULATION BASED STUDY

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126,343
PATIENTS ANALYZED

22,432
ALNDS PERFORMED

29%→12%
ALND RATE DECLINE

505
SURGEONS

Background

- Indications for axillary lymph node dissection (ALND) have been **decreasing** in breast cancer management over the past 20 years
- ALND is now largely performed in **complex cases**



OBJECTIVE:
To examine trends in ALND over time and describe individual surgeon volume

Methods

Study Design

Population-based cohort study of Ontario residents ≥18 years with breast cancer (2012 - 2024)

Exclusion Criteria

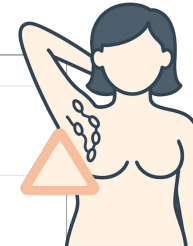
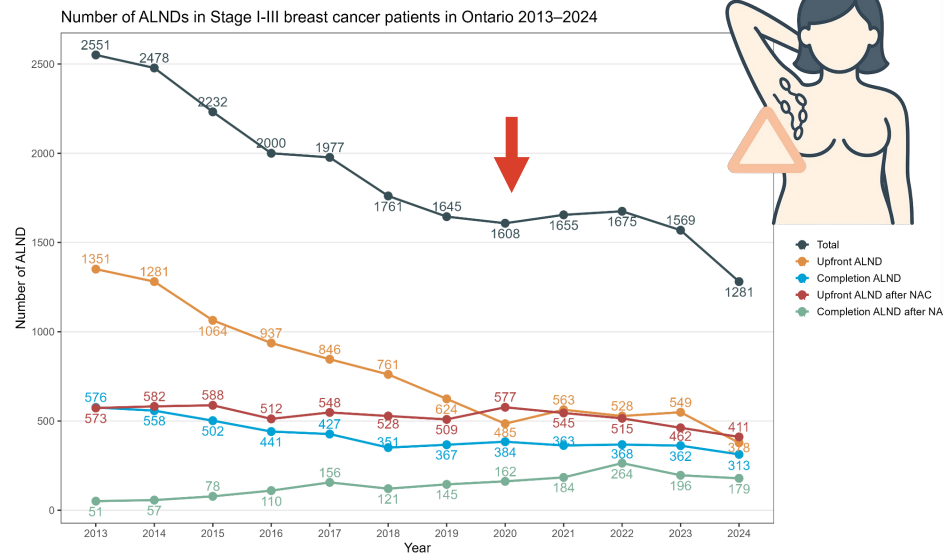
- In situ carcinoma (DCIS) or metastatic disease
- No breast surgery within 1 year of diagnosis

Covariates

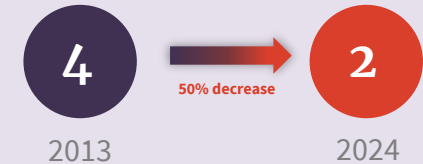
Age Stage T stage N stage HR Status HER2 SES

AJCC 8th edition staging guidelines

Results: Provincial trends in ALND over time



Median ALNDs per Surgeon/year



- **86%** of ALND surgeons were non-breast specialists
- ALND surgeons: median **30 years** since graduation (vs 19 years)

Key Findings:

- ALND declined from 29% in 2013 to 12% in 2024
- Post-pandemic increase in ALNDs, mostly driven by patients having **upfront surgery** (2022-2024 dissections)
- Of 2,498/4,525 (55%) were performed in patients who had surgery as first treatment → only 37% of had a SLNB prior to ALND
- Post-NAC ALNDs have declined since 2020, likely reflecting increased SLNB use and higher rates of axillary pCR.

Conclusions

- 1 ALND use declined in Stage I–III breast cancer (2013–2024)
- 2 Post-pandemic increase was driven by upfront surgery cases.
- 3 ALND volume is concentrated among low-volume surgeons, limiting early-career exposure.
- 4 Further research is needed to evaluate volume-outcome relationships in these complex cases