

# Recent Evolution in the Management of Lymph Node Metastases in Melanoma

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## BACKGROUND

- Melanoma is a malignant tumor typically of the skin that arises from the proliferation of melanocytes
- Melanoma spreads via the lymphatic system, and the status of the **sentinel lymph node (SLN)** is amongst the most important prognostic factors for patients
- Completion Lymph Node Dissection (CLND)** has been the standard recommendation of care following a positive Sentinel Lymph Node Biopsy (SLNB)
- There have been several studies that have sought to determine if it is **safe to avoid CLND** in patients following a positive SLNB<sup>1,2</sup>.
- Few studies have examined the practice patterns and trends in the performance of CLND among patients after a positive SLNB.

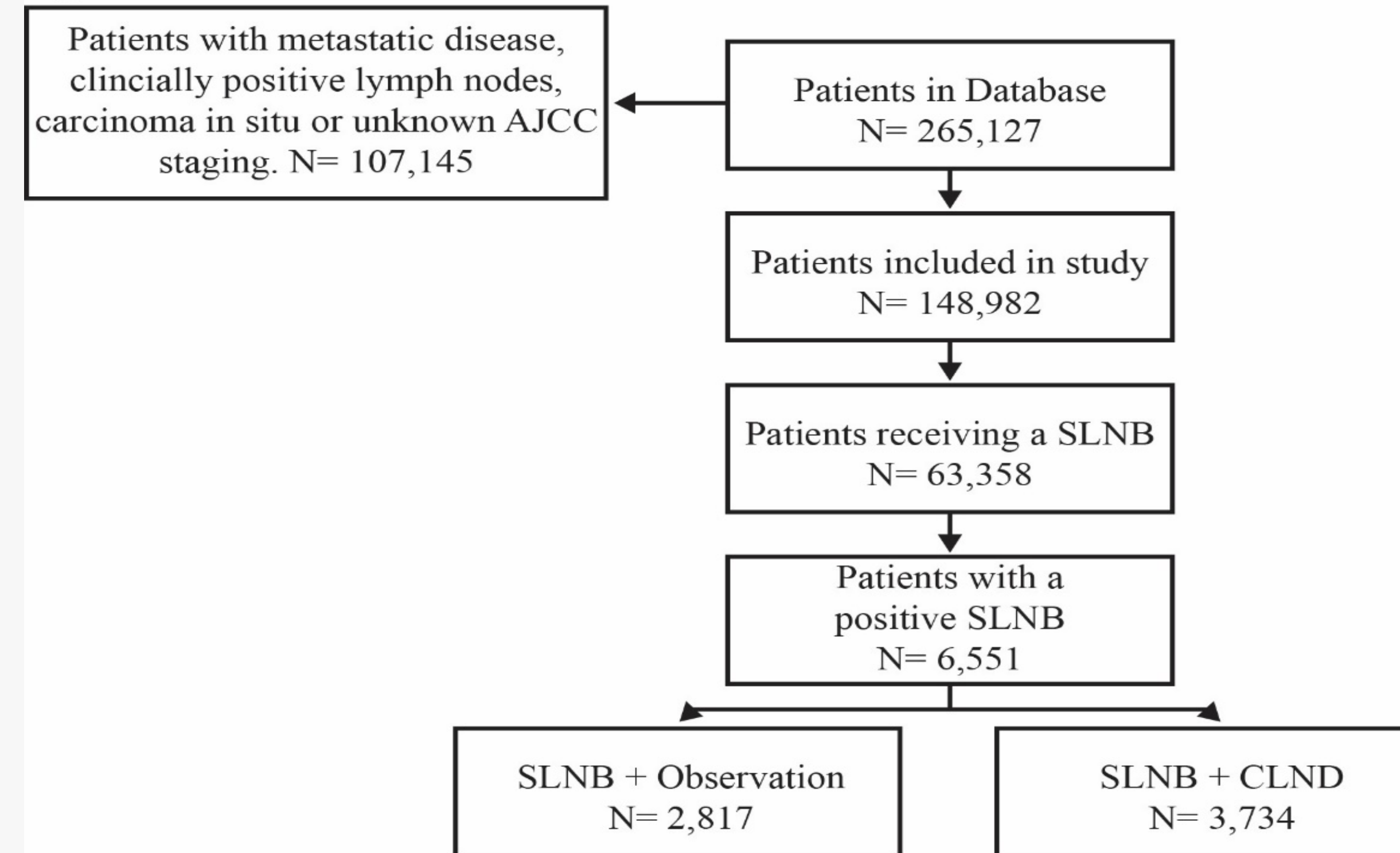
## OBJECTIVE

- To examine the national trends and practice patterns regarding the utilization of CLND among patients after a positive SLNB.
- To identify which patients and tumor characteristics were associated with undergoing a CLND and those associated with observation following a positive SLNB.

## METHODS

- A **cross-sectional study** was conducted using the National Cancer Database (NCDB).
- Patients 18 years or older who were diagnosed with melanoma between 2012-2016 were included
- A hierarchical logistical regression model with hospital-level random intercepts was constructed to examine the factors associated with SLNB followed by observation vs. SLNB with CLND.

Figure 1: Flowchart of inclusion and exclusion criteria.



CLND after Positive SLNB

Year	N=	%
2012	716	63%
2016	719	47%

Table 1. CLND performance after a positive SLNB in 2012 compared to 2016. Overall, CLND was performed in 57% of cases (n=3,734).

Factors Significantly Associated with Undergoing CLND

	Number (%)	P Value	Odds Ratio
Age			
≤55	1,685 (45.1%)	<0.0001	0.687
55-65	917 (24.6%)	0.0237	0.886
Charleston-Deyo Score			
0	3,112 (83.3%)	0.0437	0.859
Location of Primary Tumor			
Head/Neck	517 (15.3%)		
Trunk	1527 (40.1%)		
Year of Diagnosis			
2012	716 (19.2%)	<0.0001	0.794

Table 2. Factors significantly associated with undergoing CLND after positive SLNB vs. observation after SLNB

## DISCUSSION

- Two clinical trials were conducted to determine if CLND had a, therapeutic role in the treatment of melanoma patients with lymph node metastases. The results demonstrated that CLND provided **no melanoma specific survival**
- Based on this evidence, SLNB in concordance with observation may be sufficient for a subset of patients.
- As evidence grows that continues to support observation in lieu of CLND, our study sought to examine practice patterns with respect to CLND after SLNB **before** the results of the clinical trials were disseminated.
- Our results showed a **significant decline** in the **usage of CLND** from 2012-2016. This may be attributed to the possibility that surgeons and patients were already aware of the impending results of the clinical trials.
- In the future, it will be essential to continue to monitor the change concerning the utilization of CLND.
- Patients with **minimal tumor burden** should be offered the choice of nodal observation via ultrasound versus CLND.
- There should be continued monitoring of the utilization of CLND in patients with more significant tumor burden who are considered a "high risk" subgroup, as they will still benefit from CLND.

## CONCLUSIONS

- We found the utilization of CLND among patients with microscopic nodal melanoma to be significantly lower in 2016 compared to 2012.
- Younger age, lack of comorbidities, and primary tumor location on the trunk or head/neck were associated with higher utilization of CLND

## REFERENCES

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