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## ASO Author Reflections: Challenges to Achieving Consistent Nodal Surveillance with Ultrasound in Melanoma

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### PAST

Active nodal surveillance with nodal basin ultrasound has become the predominant management option for sentinel lymph node (SLN)-positive melanoma over the past half-decade after publication of the second Multicenter Selective Lymphadenectomy Trial (MSLT-II) and the German Dermatologic Cooperative Oncology Group study (DeCOG-SLT).<sup>1-3</sup> These research protocols required frequent nodal surveillance ultrasounds, i.e. every 4 months for the first 2 years followed by every 6 months years 3–5 post-resection in the MSLT-II cohort.<sup>1</sup> Although this protocol demonstrated equivalent disease-specific survival for active nodal surveillance patients compared with those who underwent completion lymph node dissection (CLND), its feasibility in real-world settings remains unknown. We sought to evaluate adherence to nodal surveillance ultrasound in sentinel node-positive patients in this single-institution retrospective review and to identify possible barriers to the consistent delivery of active nodal surveillance.

### PRESENT

Our study demonstrated a 34% rate of adherence to nodal surveillance ultrasound (defined in this study as one or more surveillance ultrasound[s] for each 6-month period post-SLN biopsy).<sup>4</sup> This low rate of US adherence was concerning given the high proportion of patients who undergo active nodal surveillance instead of CLND. Notably, 30% of the cohort was lost to follow-up at our institution but with planned follow-up with an outside medical oncologist. As a large tertiary care center that draws patients from across Alabama and surrounding states, our institution often receives referrals for surgical oncology care of melanoma patients who then choose to follow-up with medical oncologists closer to their homes. Patients in our study received more cross-sectional imaging studies per 6-month period than ultrasounds, and a strong trend towards an increased rate of receipt of adjuvant systemic therapy in the US non-adherent group was seen.<sup>4</sup> We suspect that this reflects the tendency of medical oncologists to surveil with cross-sectional imaging during adjuvant systemic therapy. Although there was not a statistically significant difference between US

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adherent and non-adherent patients in travel distance to the treating institution, patients in our study traveled a median of 77 miles (range 5–249 miles) to undergo nodal surveillance ultrasounds, likely unsurprising given the scarcity of facilities in our state that perform this specialized nodal basin ultrasound protocol.

The results of this study are meaningful to the ongoing assessment of active nodal surveillance in real-world practice, especially considering the increasingly higher proportions of SLN-positive melanoma patients undergoing both active nodal surveillance and adjuvant systemic therapy. While patients undergoing adjuvant therapy typically receive regular cross-sectional imaging under the purview of medical oncologists, nodal basin ultrasound has been shown to have higher sensitivity and specificity for identifying nodal recurrences<sup>5</sup> and we believe should continue as a dedicated element of active nodal surveillance for SLN-positive patients. Additionally, our study highlights some of the key challenges to the delivery of nodal surveillance ultrasound for patients from both urban and rural settings. While the adoption of active nodal surveillance over CLND after MSLT-II and DeCOG-SLT has been rapid, and with obvious benefit to patients in terms of morbidity avoidance, the ability to detect and surgically resect nodal recurrences in a timely manner will suffer if we are not able to ensure consistent nodal surveillance ultrasound adherence for all patients who choose active surveillance.

## FUTURE

Future work will need to include multi-institutional collaborations to evaluate nodal surveillance ultrasound adherence with a larger sample size across different regions, patient demographics, and practice types. It will also be critical to pursue intentional coordination with medical oncologists, who may see these patients more frequently while administering adjuvant therapy, to ensure that patients are receiving nodal basin ultrasounds along-side cross-sectional or other surveillance imaging to adequately assess for nodal basin recurrence. Additionally, adherence to nodal ultrasound surveillance may be improved through increased access to quality nodal ultrasound for patients from rural areas, which would likely require dissemination of standardized nodal basin ultrasound protocols and training to providers and technicians in less populated regions.

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