SENTINEL NODE STAGING OF PRIMARY MELANOMA BY THE "10% RULE"; PATHOLOGY AND CLINICAL OUTCOMES

Emery RE, Stevens JS, Nance RW, Corless CL, Vetto JT
Oregon Health & Science University, Division of Surgical Oncology, Portland, OR

Background: Staging of clinically node negative, primary cutaneous melanoma by the "10% Rule" involves lymph node mapping using technetium-sulfur colloid, followed by surgical removal of nodes that have taken up the isotope until a background count of 10% or less of the count of the "hottest" node is reached. Alternatively, some have suggested that removal of only the "hottest" node may achieve the same staging outcomes with fewer nodes removed.

Methods: To determine the utility of the 10% Rule, a prospectively collected University data base of clinically node negative melanomas surgically staged using this rule was examined for tumor characteristics, operative findings, lymph node pathology, and patient outcomes.

Results: Of 177 cases, 22 (12.5%; 15% of intermediate thickness [T2,T3] lesions) had tumor in the sentinel node ("SN positive"). At an average of 49 months follow-up, disease free survival was 63% for SN positive patients, vs. 92% for SN negative patients ($p=0.01$). Use of the 10% Rule resulted in removal of a total of 461 nodes from all patients (2.6 nodes/case). Among the 22 SN positive cases, use of the rule resulted in removal of 21 additional nodes, seven of which contained tumor; in 3 cases (14%) the positive SN was not the "hottest" node.

Conclusions: Sentinel node staging of melanoma by the 10% Rule provides significant prognostic information and a modest increase in tumor detection compared to removal of only the "hottest" node.