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Best Abstracts

Reduction of need for operative sentinel node procedure in melanoma patients: fifty percent identification rate of sentinel node positivity by ultrasound (US)-guided fine needle aspiration cytology (FNAC) in 400 consecutive patients

C.A. Voit¹, A.C.J. van Akkooi², G. Schaefer-Hesterberg¹,
A. Schoengen³, W. Sterry¹, A.M.M. Eggermont²

¹Charité Campus Mitte, Dermatology, Berlin, Germany; ²Erasmus University MC – Daniel den Hoed Cancer Center, Surgical Oncology, Rotterdam, The Netherlands; ³Armed Forces Hospital, Hematology and Oncology, Ulm, Germany

Background: SN status of stage I/II melanoma patients (pts) is the most important prognostic factor survival. SN-staging by far outperforms PET-scanning or any other imaging. The potential to reduce the need for operative SN-biopsy procedures by pre-operative US-FNAC of the regional lymph node basin has been investigated prospectively by us.

Methods: Prospective database of 524 consecutive pts that, after lymphoscintigraphy, underwent an US-exam of the regional lymph node basin(s) prior to the operative SN procedure. When the US-exam showed a suspicious or clearly malignant pattern, pts underwent a FNAC. Outcome in the first 400 pts with stage I–II (AJCC staged, median Breslow thickness 2.7 mm) was determined at a median follow up of 28 months (mean 30 mts, range 1–66). For pts with a positive SN we considered the pre-SN US/US-FNAC positive if either US and/or FNAC were positive. If both were only suspicious, it was considered negative.

Results: US guided FNAC identified 51/79 (65%) of SN metastases. Specificity was 99% (317/321) with a positive predictive value (PPV) of 93% and a negative predictive value (NPV) of 92%. SN identification rate by US guided FNAC increased from 40% in stage pT1a/b to 79% in stage pT4a/b according to the higher probability for nodal disease in higher pT stages (4% in pT1ab vs. 57% in pT4ab). US guided FNAC became more sensitive with increasing tumor load. SN deposits >1.0 mm were detected in 86% of cases, whereas 0.1–1.0 mm deposits were detected in 46% of cases. Estimated 3-year survival rates were 93% for US guided FNAC negative versus 49% for positive pts. Of the node positive pts, 49% (39/79) were identified by US guided FNAC. A larger proportion of the 524 pts and updated DFS/OS will be reported.

Conclusions: US-guided FNAC of SNs is highly accurate. With a PPV of 93% and a NPV of 92% it identified 50% of the SN positive pts pre-operatively. We therefore recommend US-FNAC to be performed routinely to reduce the need for operative SN-procedures.