

# Outcome of Multidisciplinary Treatment of Merkel Cell Carcinoma of the Upper Extremity

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**INTRODUCTION:** Skin cancers represent the most common malignancy of the upper extremity. Merkel cell carcinoma (MCC) is a rare and aggressive non-melanoma skin cancer arising from cutaneous neuroendocrine cells. MCC has a propensity for local and distant disease recurrence. Currently there is a paucity of data examining the outcome of MCC arising from the upper extremity. The purpose of the current study was to examine the treatment outcome of patients with MCC of the upper extremity.

**METHODS:** A retrospective review was conducted on 270 patients with MCC from a single institution, of which 65 (24.7%) patients had MCC of the upper extremity. The group included 45 (69.2%) males and 20 females, with a mean age of 70±11 years at the time of biopsy. All histology was confirmed by fellowship trained dermatopathologists. Tumors were located on the upper arm (n=15), elbow (n=5), forearm (n=21), wrist (n=3), and finger/hand (n=21). Data was collected on the workup and treatment modalities for each patient along with rate of disease recurrence. Recurrence-free survival and disease-specific survival were evaluated using Kaplan-Meier analysis.

**RESULTS:** Fifty-nine (90.8%) patients underwent wide local excision, 4 (6.2%) patients underwent Mohs micrographic surgery, and two (3.1%) patients with metastatic disease on presentation did not receive surgery. Sentinel lymph node biopsy (SLNB) was performed in 57/65 (87.7%) patients, 15 (26.3%) of whom had positive sentinel nodes for metastatic disease. Adjuvant radiotherapy was delivered to the primary site in 24/65 (36.9%) patients, 8 (33.3%) of whom also received radiation to the regional lymph node basin. Four (6.2%) patients received systemic chemotherapy. Recurrence-free survival was 80.4% at one year, 72.4% at three years, and 66.9% at five years (Figure 1). Of the 21 patients who experienced disease recurrence, 9 (42.9%) had regional recurrence and 12 (57.1%) had distant recurrence. There were no instances of local recurrence. Disease-specific survival was 93.5% at one year, 82.8% at three years, and 82.8% at five years (Figure 2).

**DISCUSSION AND CONCLUSION:** Merkel cell carcinoma (MCC) is a rare cutaneous neuroendocrine carcinoma with a high propensity for regional nodal spread and a predilection towards sun-exposed areas, including the hand and wrist. Despite aggressive treatment including margin-negative resection, adjuvant radiotherapy to the primary site and regional nodes, and chemotherapy, MCC of the upper extremity has a significant rate of recurrence within 5 years of diagnosis. However, disease-specific survival is high at 5 years despite this high recurrence rate.

