

Adjuvant Radiation Therapy Correlates with Increased Disease Free Survival In Stage I Merkel Cell Carcinoma

Stephen Poteet, Kevin Sexton, Alexander Schmidt, Ash Patel, Michael Osgood, Mark Kelley, Bruce Shack.

Introduction:

Ideal treatment for Merkel cell carcinoma involves the combination of surgical excision¹ and radiation therapy (XRT) for lesions > 2cm.² We hypothesize a similar relationship between radiation therapy and disease-free survival among patients with lesions < 2cm in size (Stage 1).

Methods:

The Vanderbilt Melanoma and Cutaneous Malignancy Data Repository was searched for patients treated for Merkel Cell Carcinoma from 1998 to 2010. Using the electronic medical record system at Vanderbilt (Starpanel), all pathology reports were queried for the keywords "Merkel Cell." Retrospective review was performed.

Results:

A total of 227 patients were identified. Of these, 26 patients were stage 1A and 16 were stage 1B. The average age of the population was 70.8 years. All patients received wide-local excision. Of the stage 1A patients, 10 received XRT; of the stage 1B patients, 7 received XRT. We investigated the correlation between adjuvant XRT for stage I Merkel cell carcinoma and time to recurrence. Using a non-parametric Spearman correlation analysis, we found a significant correlation between XRT and time to recurrence, ($\rho = 0.536$, $p = 0.048$). We then investigated the correlation of adjuvant XRT and time to recurrence between Stage 1A and Stage 1B. Using the same statistical model, we found a significant correlation between XRT and time to recurrence for Stage 1B ($\rho = 0.845$, $p = 0.008$).

Conclusions:

Radiation therapy is associated with increased disease-free survival in early stage Merkel Cell, specifically Stage 1B. Stage 1 patients should be treated with local excision and adjuvant radiation therapy.