Table 2. Characteristics of 51 Metastatic Basal Cell Carcinoma Cases With Survival Data by Whether Adjuvant Therapy Was Received

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Adjuvant Therapy (n = 22)</th>
<th>No Adjuvant Therapy (n = 29)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male sex, No. (%)</td>
<td>16 of 22 (73)</td>
<td>17 of 29 (59)</td>
</tr>
<tr>
<td>Survival, median (range), mo</td>
<td>11.0 (1.0-108.0)</td>
<td>10.0 (0.5-96.0)</td>
</tr>
<tr>
<td>According to treatment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radiation alone</td>
<td>8 (6-108)</td>
<td>...</td>
</tr>
<tr>
<td>Chemotherapy alone</td>
<td>11 (2-72)</td>
<td>...</td>
</tr>
<tr>
<td>Combination</td>
<td>12 (3-54)</td>
<td>...</td>
</tr>
<tr>
<td>Age at onset of primary tumor, y</td>
<td>47.1 (21.0-80.0)</td>
<td>47.2 (22.0-72.0)</td>
</tr>
<tr>
<td>median (range)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tumor size, mean (range), cm</td>
<td>6.8 (2.0-20.0)</td>
<td>14.3 (3.0-40.0)</td>
</tr>
<tr>
<td>Interval before metastasis, median (range), y</td>
<td>10 (3-26)</td>
<td>11 (3-25)</td>
</tr>
<tr>
<td>Site of metastasis, No.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>Distant</td>
<td>16</td>
<td>19</td>
</tr>
</tbody>
</table>

Abbreviation: Ellipses, no data.

4 P > .05 for all comparisons.

Our updated review suggests that the overall prognosis of mBCC continues to be poor, with a median survival of 10 months, despite 44% of patients with mBCC receiving adjuvant chemotherapy or radiation in the past 30 years. These data suggest that radiation and chemotherapy have not significantly improved mBCC survival regardless of age, sex, tumor size, or local vs distant metastasis, although the small sample size may contribute to a lack of power to detect a difference in this rare condition. Our results may be particularly important as historic controls to compare any survival benefit from novel hedgehog pathway inhibitors, such as vismodegib.4 With the continued development of targeted therapies for BCC, we will likely see changes in the way we manage mBCC that may improve disease-free and overall survival.4

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Author Contributions: Drs Wysong and Tang had full access to all of the data in the study and take responsibility for the integrity of the data and the accuracy of the data analysis. Study concept and design: Wysong and Tang. Acquisition of data: Wysong. Analysis and interpretation of data: All authors. Drafting of the manuscript: Wysong and Tang. Critical revision of the manuscript for important intellectual content: Aasi and Tang. Statistical analysis: Wysong. Administrative, technical, and material support: Wysong and Tang. Conflict of Interest Disclosures: None reported.

Rerecurrence 5 Years After Treatment of Recurrent Cutaneous Basal Cell and Squamous Cell Carcinoma

Our updated review suggests that the overall prognosis of mBCC continues to be poor, with a median survival of 10 months, despite 44% of patients with mBCC receiving adjuvant chemotherapy or radiation in the past 30 years. These data suggest that radiation and chemotherapy have not significantly improved mBCC survival regardless of age, sex, tumor size, or local vs distant metastasis, although the small sample size may contribute to a lack of power to detect a difference in this rare condition. Our results may be particularly important as historic controls to compare any survival benefit from novel hedgehog pathway inhibitors, such as vismodegib.4 With the continued development of targeted therapies for BCC, we will likely see changes in the way we manage mBCC that may improve disease-free and overall survival.4

2.4% to 12.1% for 202 recurrent tumors. The generalizability of these results to the United States, to other BCCs and SCCs, and after treatments delivered in the community is not clear. We sought to determine the 5-year recurrence rate after treatment of a consecutive cohort of BCCs and SCCs already recurrent at presentation.

Methods. The design of this prospective observational cohort study has been described; this research was approved by the committee on human research, University of California, San Francisco. All 1536 patients with 1993 BCCs or SCCs in 1999 through 2000 at a university-based private practice or the dermatology clinics at the affiliated Veterans Affairs Medical Center (VA) were enrolled. We eliminated tumors in patients with basal cell nevus syndrome and restricted the sample to tumors treated with the 3 main therapies: electrodessication and curettage (EDC), elliptical excision, or Mohs surgery. Analysis was limited to patients with follow-up after treatment (93.8%). In this report we compare 126 patients with recurrent tumors that re-recurred are presented in the Table; 87.5% of tumors that re-recurred were BCCs, and 37.5% were in the H-zone of the face. The median time for detection of recurrence was 1.3 years for recurrent tumors (IQR, 1.8-2.3) and 3.9 years for primary tumors (IQR, 1.8-5.3) (P = .15). Overall, the unadjusted 5-year recurrence about recurrence was the medical record, supplemented by physical examination by the study dermatologist for patients who consented to participate.

Characteristics in the primary and initially recurrent groups were compared using χ² or Fisher exact tests for categorical variables and Mann-Whitney U tests for continuous variables. Unadjusted recurrence rates were calculated using the Kaplan-Meier method. Data were right-censored at the last date of care. Survival functions were compared using the log-rank test.

Results. At enrollment, patients with recurrent tumors were similar (P > .05) to those with primary tumors (mean age, 69.0 years; 76.9% were male). Compared with primary tumors, recurrent tumors were similar in body location and likelihood of being in the H-zone of the face but were more often BCCs (75.6% vs 83.2%; P = .04), were larger (8.0 mm vs 10.0 mm, P = .03), and were more likely to have histopathologic risk factors for recurrence (20.4% vs 29.9%; P = .009). Also, recurrent tumors differed in the treatment groups; for example, those treated with Mohs surgery were more likely to be BCC (P = .04) and located in the H-zone of the face (P < .001).

Over the follow-up period, 8 recurrent tumors re-recurred (5.8% [95% CI, 1.9%-9.8%]): 3 after excision and 5 after Mohs surgery. No recurrent tumors treated with EDC re-recurred. Details about the 8 recurrent tumors that re-recurred are presented in the Table; 87.5% of tumors that re-recurred were BCCs, and 37.5% were in the H-zone of the face. The median time for detection of recurrence was 1.3 years for recurrent tumors (IQR, 0.97-4.6) and 3.9 years for primary tumors (IQR, 1.8-5.3) (P = .15). Overall, the unadjusted 5-year recurrence...
rate calculated using survival analysis techniques was 5.1% for recurrent tumors (95% CI, 2.3%-11.0%) vs 3.4% for primary tumors (95% CI, 2.4%-4.6%) (P=.18). The Figure depicts Kaplan-Meier curves of tumor recurrence for primary and recurrent tumors.

Discussion. To our knowledge, this study is the largest prospective cohort study in the United States examining long-term re-recurrence of recurrent BCCs and SCCs treated with the 3 most common treatments. Tumors in the treatment groups differed in severity, and given the small number of recurrences overall we cannot compare effectiveness after different therapies or adjust for other risk factors. The results suggest, however, that overall re-recurrence rates of already recurrent BCCs and SCCs treated in the community may be less than conventionally believed.

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Author Contributions: All authors had full access to the data in this report and take responsibility for its integrity and the accuracy of the analysis. Study concept and design: Chren. Acquisition of data: Stuart and Chren. Analysis and interpretation of data: Hamilton and Parvataneni. Drafting of the manuscript: Hamilton and Chren. Critical revision of the manuscript for important intellectual content: All authors. Statistical analysis: Hamilton, Parvataneni, and Chren. Obtained funding: Chren. Administrative, technical, and material support: Stuart. Study supervision: Hamilton and Chren.

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Nonmelanoma Skin Cancer in Organ Transplant Recipients: Increase Without Delay After Transplant and Subsequent Acceleration

Organ transplant recipients (OTRs) have a 60- to 250-fold increased risk for cutaneous squamous cell carcinoma (SCC) and a 10-fold increased risk for basal cell carcinoma (BCC). It is still unclear, however, how fast after transplant these tumors arise. To develop risk-adjusted clinical follow-up in OTRs, we investigated the incidence of first and subsequent nonmelanoma skin cancers (NMSCs) in OTRs.