To Re-excise or Not to Re-excise: Positive Margins After Excision of Non-Melanoma Skin Cancers

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To Re-Excise or Not to Re-Excise: Positive Margins after Excision of Non-Melanoma Skin Cancers

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Introduction:
Non-Melanoma Skin Cancer (NMSC)
• Most common cancer in U.S.
• Greater than 2 million cases treated per year
• Basal Cell Carcinoma (BCC) and Squamous Cell Carcinoma (SCC) make up majority
• SCC has higher potential for metastases
• Majority occur in Head & Neck region, cosmetically sensitive locations

Purpose:
Management of positive margins after non-melanoma skin cancer (NMSC) excision is controversial. Our goal was to determine the rate of residual tumor in re-excised NMSC specimens after previous excision with positive margins (true-positive). Further, we sought to determine potential factors that could predict a true-positive margin.

• IRB-approved retrospective review
• A total of 2,886 patients were evaluated; 160 patients met inclusion criteria
  – NMSC excision with positive margins by permanent evaluation and subsequent re-excision for clearance of tumor.
• Variables collected included:
  – age, gender, history of previous skin cancer, location of tumor, skin cancer type and subtype, maximal length of lesion upon initial excision, maximal length of lesion upon re-excision, surface area of initial excision and re-excision, depth of initial excision and re-excision, perineural invasion, lymphovascular invasion, location of positive margin (deep vs. peripheral), and time interval between first and second excisions.

Results:
• 83 patients (52%) with positive margins on initial excision had no evidence of residual cancer upon re-excision.
• Most common locations for lesions with positive margins on initial excision were on the face.
• Gender and age were not associated with a positive re-excision (p>0.05) (Table 1).
• Patients with a previous history of basal cell carcinoma (BCC) were more likely to have a true-positive margin (p = 0.03) (Table 1).
• Larger re-excisions were more likely to be positive re-excision (Table 2).
• A longer time to re-excision was less likely to find residual cancer (Figure 1).

Discussion:
• Tissue shrinkage after excision
  – Healthy skin shrinkage occurs more than tumor laden skin
• Host defense clears residual cancer
  – Longer time to re-excision supports this theory
• Use of electrocautery at excision site could destroy remaining cancer cells

Conclusion:
The absence of residual tumor after re-excision of specimens with positive margins is 52%, similar to that report in the literature. Patients with BCC and larger re-excisions are more likely to have residual cancer upon re-excision. Lesions with positive deep and lateral margins or SCC, are recommended for re-excision. Lesions that require re-excision and are located in cosmetically sensitive areas may best be served by Mohs surgery. For smaller lesions, close observation may be more practical method of treatment.

Table 1. Patient Demographic and Re-Excision Pathology

<table>
<thead>
<tr>
<th>Variable</th>
<th>First Excision</th>
<th>Re-Excision</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>70 ± 12</td>
<td>71 ± 14</td>
<td>0.6</td>
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<tr>
<td>History of Ca: BCC</td>
<td>53 (22.9%)</td>
<td>13 (4.8%)</td>
<td>0.02</td>
</tr>
<tr>
<td>SCC</td>
<td>10 (4.4%)</td>
<td>11 (3.8%)</td>
<td>0.13</td>
</tr>
<tr>
<td>Face</td>
<td>98 (43.3%)</td>
<td>106 (39.8%)</td>
<td>0.56</td>
</tr>
<tr>
<td>Extremities</td>
<td>129 (55.6%)</td>
<td>136 (49.7%)</td>
<td>0.34</td>
</tr>
<tr>
<td>Scalp</td>
<td>10 (4.4%)</td>
<td>11 (3.8%)</td>
<td>0.13</td>
</tr>
<tr>
<td>Neck</td>
<td>126 (54.6%)</td>
<td>130 (47.1%)</td>
<td>0.46</td>
</tr>
</tbody>
</table>

Table 2. Location and Re-excision of NMSC

<table>
<thead>
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Figure 1. Kaplan-Meier Curve: Positive on 2nd Surgery

Figure 2. Patient Population NMSC Subtypes

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