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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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# 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 reexcised 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 harbor residual cancer (Table 1).
- Location of lesion did not predict positive re-excision (Table 2).
- A longer time to re-excision was less likely to find residual cancer (Figure 1).

| Table 1. Patient Demographic and Re-Excision Pathology |                             |                             |         |  |  |
|--|-----------------------------|-----------------------------|---------|--|--|
|  | Negative Re-excision (n=83) | Positive Re-excision (n=77) | p value |  |  |
| Female   | 28 (34%)                    | 31 (40%)                    | 0.30    |  |  |
| Age  | 70.5 <u>+</u> 12.9          | 72.1 <u>+</u> 14.8          | 0.69    |  |  |
| History of Ca: BCC                                     | 19 (22.9%)                  | 31 (40.3%)                  | 0.03    |  |  |
| History of Ca: SCC                                     | 11 (13.3%)                  | 9 (11.7%)                   | 0.56    |  |  |
| Cm <sup>2</sup> First Excision                         | 1.36                        | 1.3                         | 0.54    |  |  |
| Cm <sup>2</sup> Re-excision                            | 2.1                         | 3.1                         | 0.01    |  |  |
| Depth First Excision                                   | 0.48                        | 0.42                        | 0.52    |  |  |
| Depth Re-excision                                      | 0.5                         | 0.56                        | 0.37    |  |  |

|             | Negative Re-excision (n=83) | Positive Re-excision (n=77) | p value |
|-------------|-----------------------------|-----------------------------|---------|
| Face        | 43 (51.8%)                  | 36 (46.8%)                  | 0.52    |
| Extremities | 16 (19.3%)                  | 18 (23.4%)                  | 0.53    |
| Trunk       | 15 (18.1%)                  | 11 (14.3%)                  | 0.52    |
| Scalp       | 6 (7.2%)                    | 7 (9.1%)                    | 0.67    |
| Neck        | 3 (3.6%)                    | 5 (6.5%)                    | 0.48    |

Figure 1. Kaplan-Meier Curve: Positive on 2nd Surgery

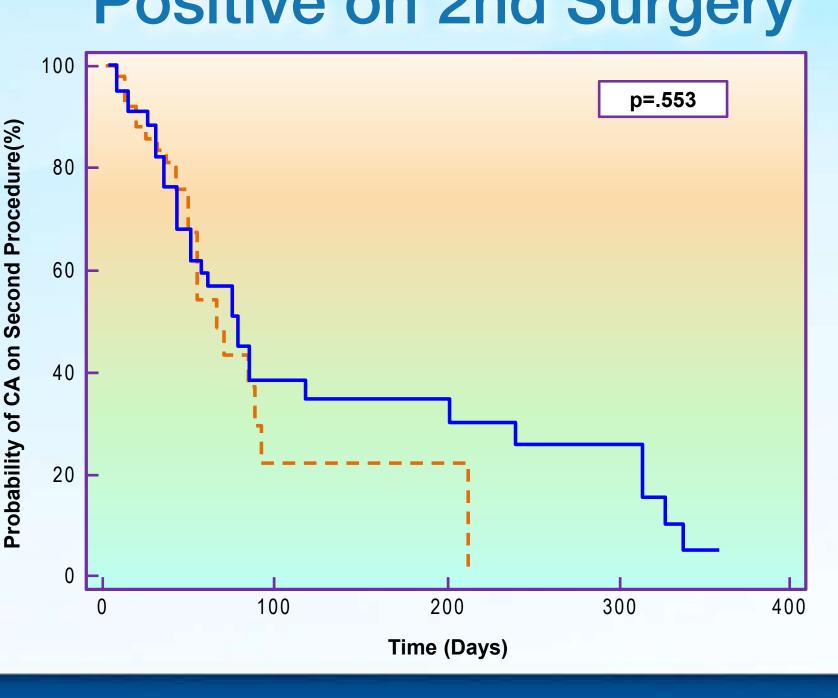
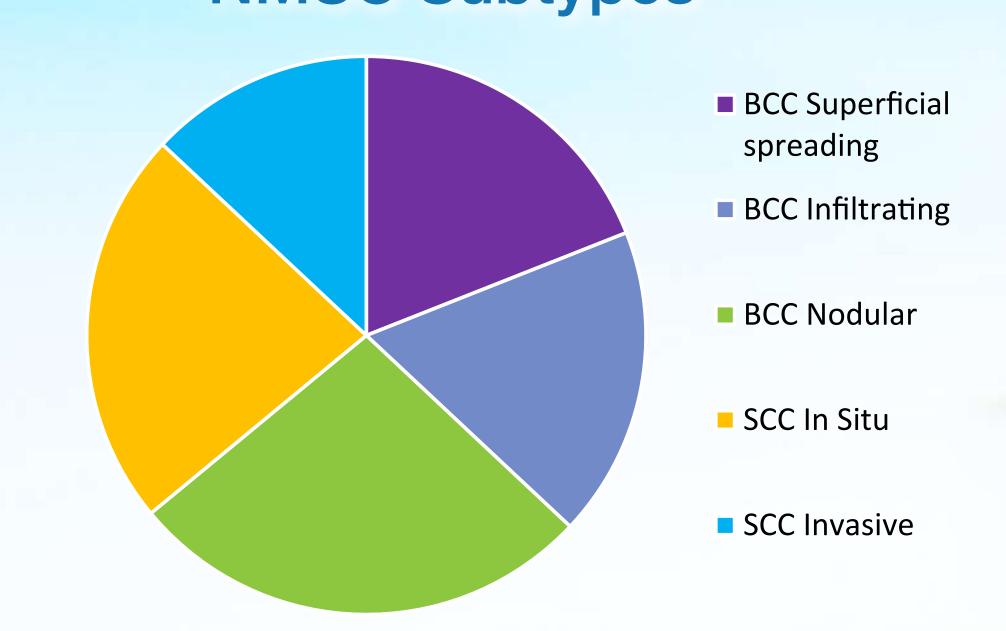


Figure 2. Patient Population NMSC Subtypes

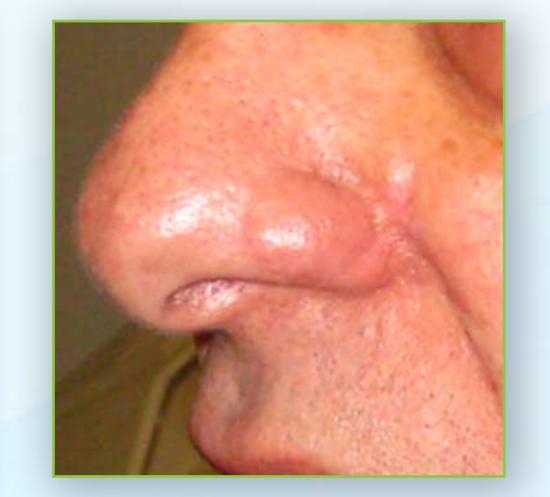


### Mohs Surgery









## 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.

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