

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 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 ± 12.9	72.1 ± 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 ² First Excision	1.36	1.3	0.54
Cm ² 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

Table 2. Location and Re-excision of NMSC			
	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

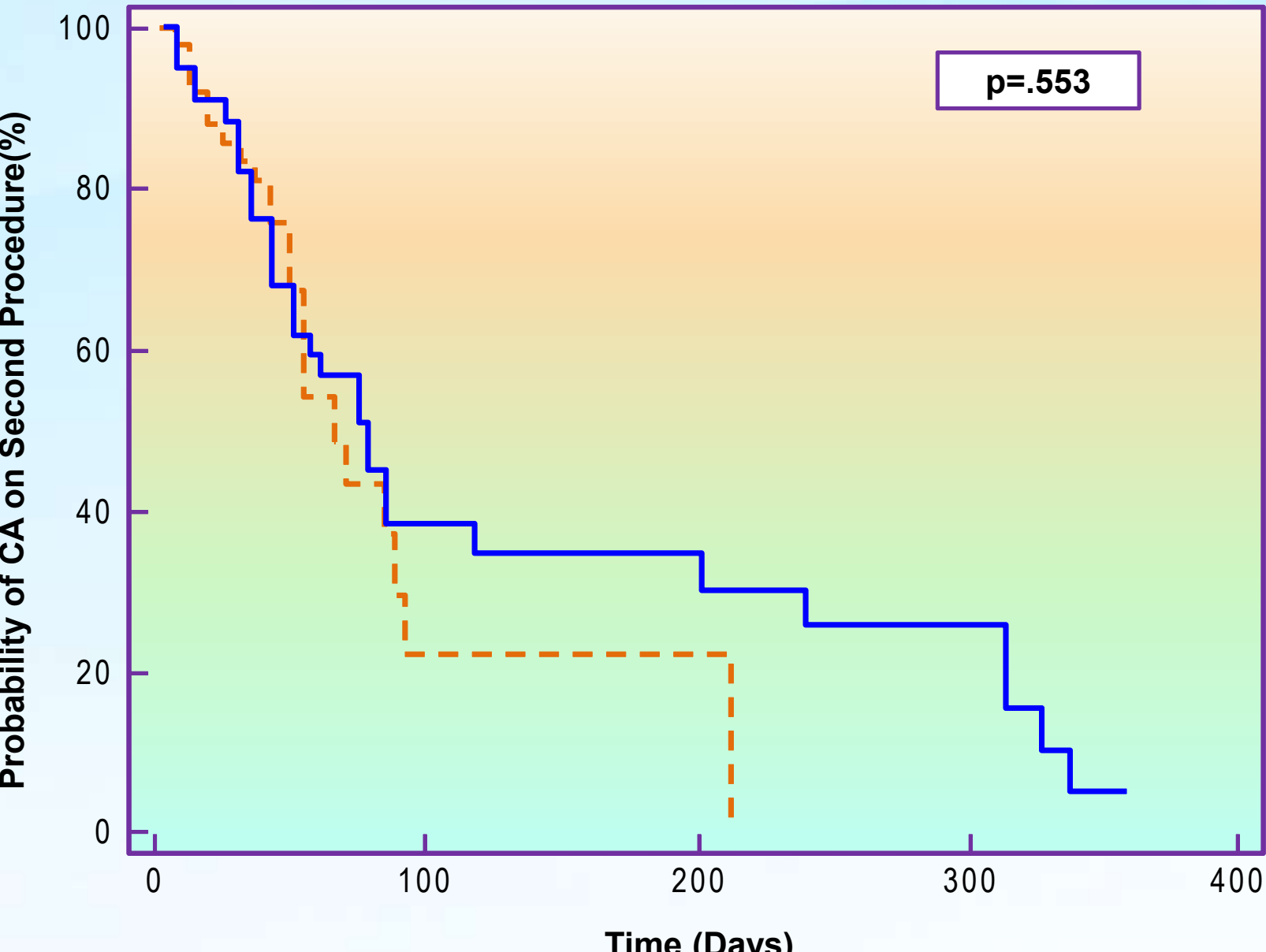
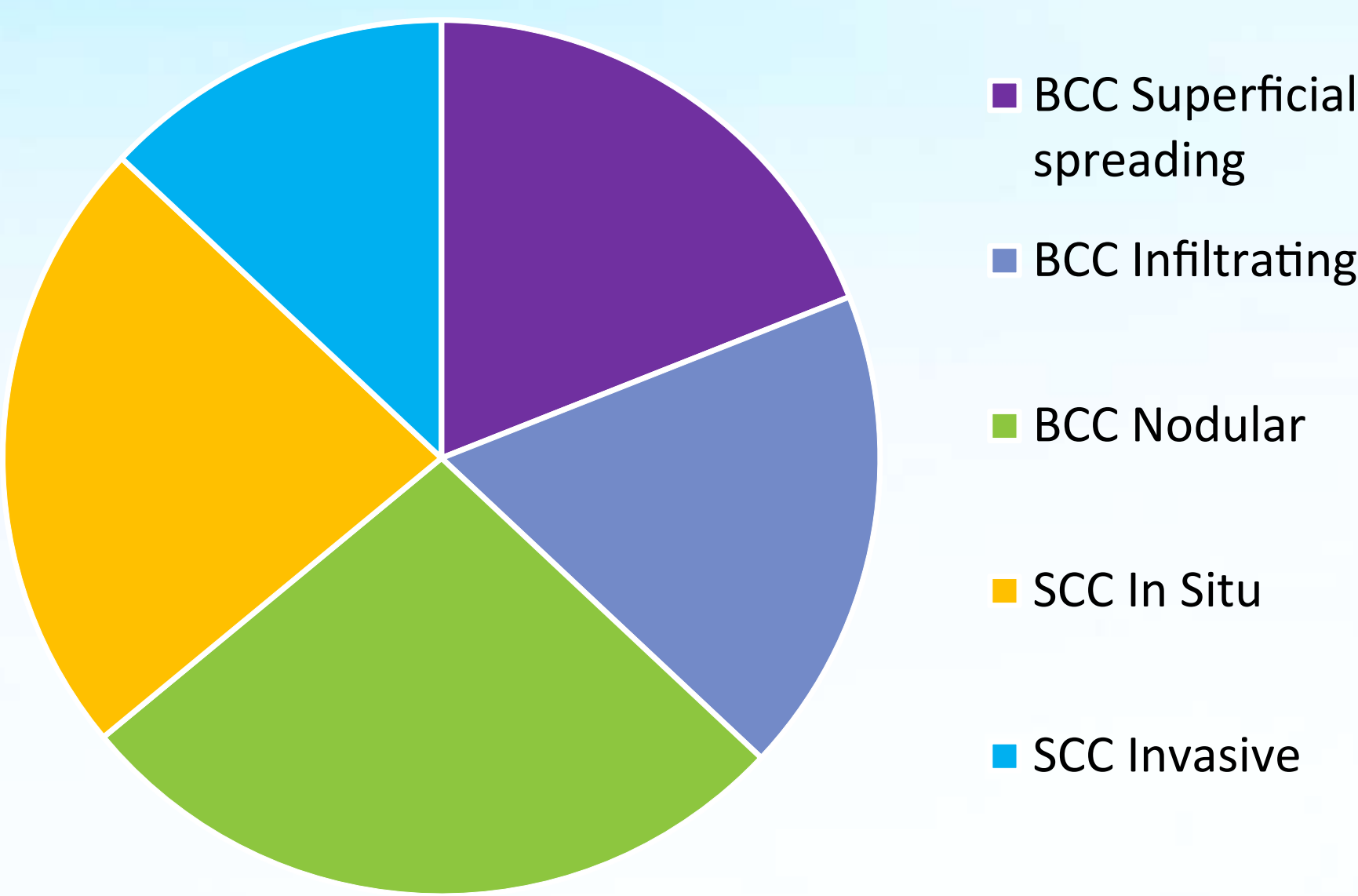


Figure 2. Patient Population NMSC Subtypes



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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