

# Recurrence Rate of Primary Bone Tumors of the Fingers

Jonathan Lans, MD; Kamil Oflazoglu, MD; Neal Chen, MD; Santiago A. Lozano-Calderón, MD, PhD  
 Orthopaedic Hand and Upper Extremity Service and Musculoskeletal Oncology Service, Massachusetts General Hospital, Harvard Medical School

## 1. Introduction

- Bone tumors of the hand are **rare** and most commonly diagnosed as **enchondroma**.
- Patients often present with an incidental lesion
- Recurrence rates
  - Enchondroma: 0-14%
  - Malignancy: 9-63%

## 2. Methods

### Design:

- Retrospective study
- ICD-9 Diagnosis codes
- Thirteen year period: 1992-2015
- 5 Urban hospitals

### Inclusion:

- Primary bone tumor of the phalanx or metacarpal
- Histologically confirmed

### Exclusion:

- <12 months follow-up
- <18 years of age

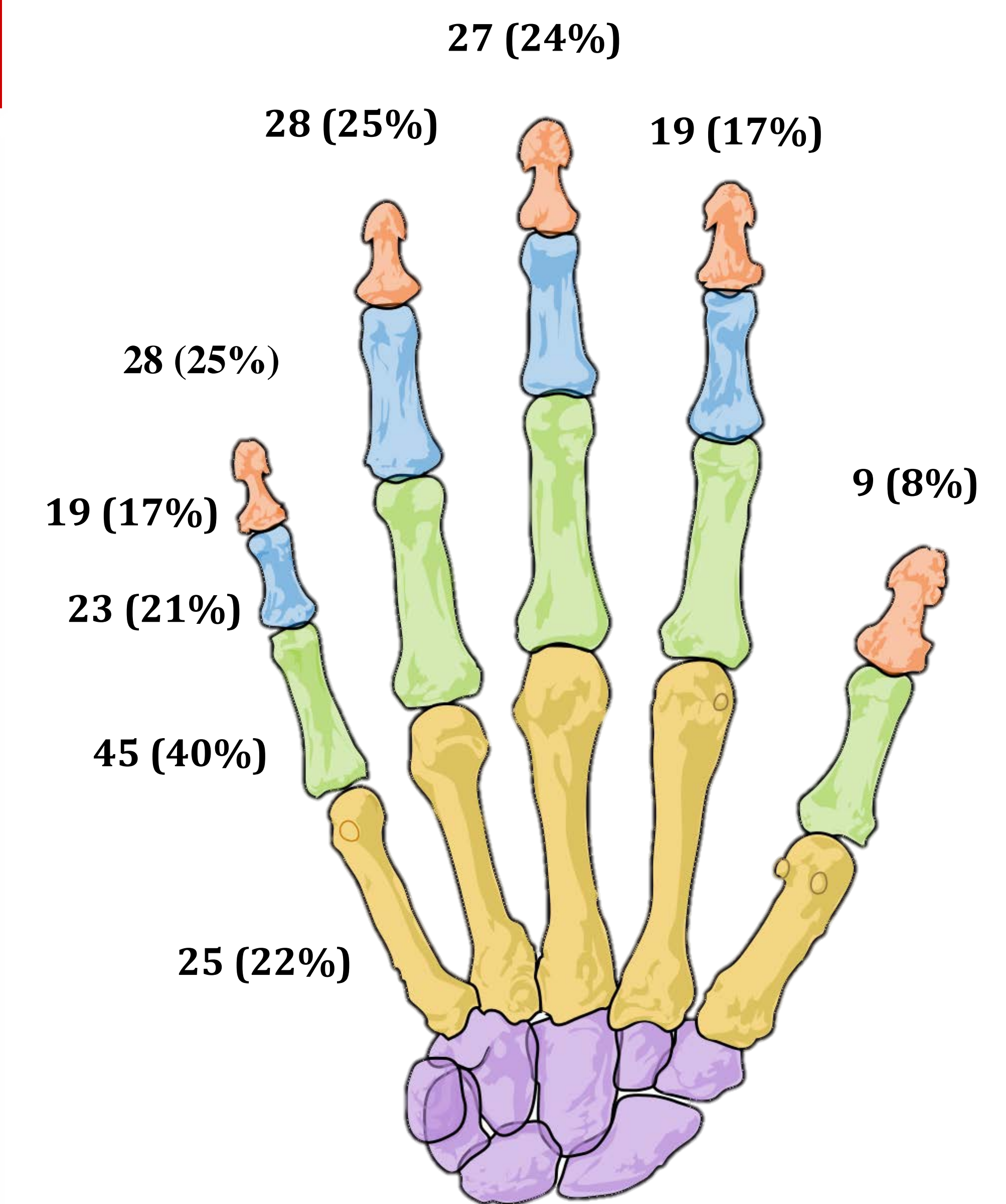
### Outcome:

- Recurrence

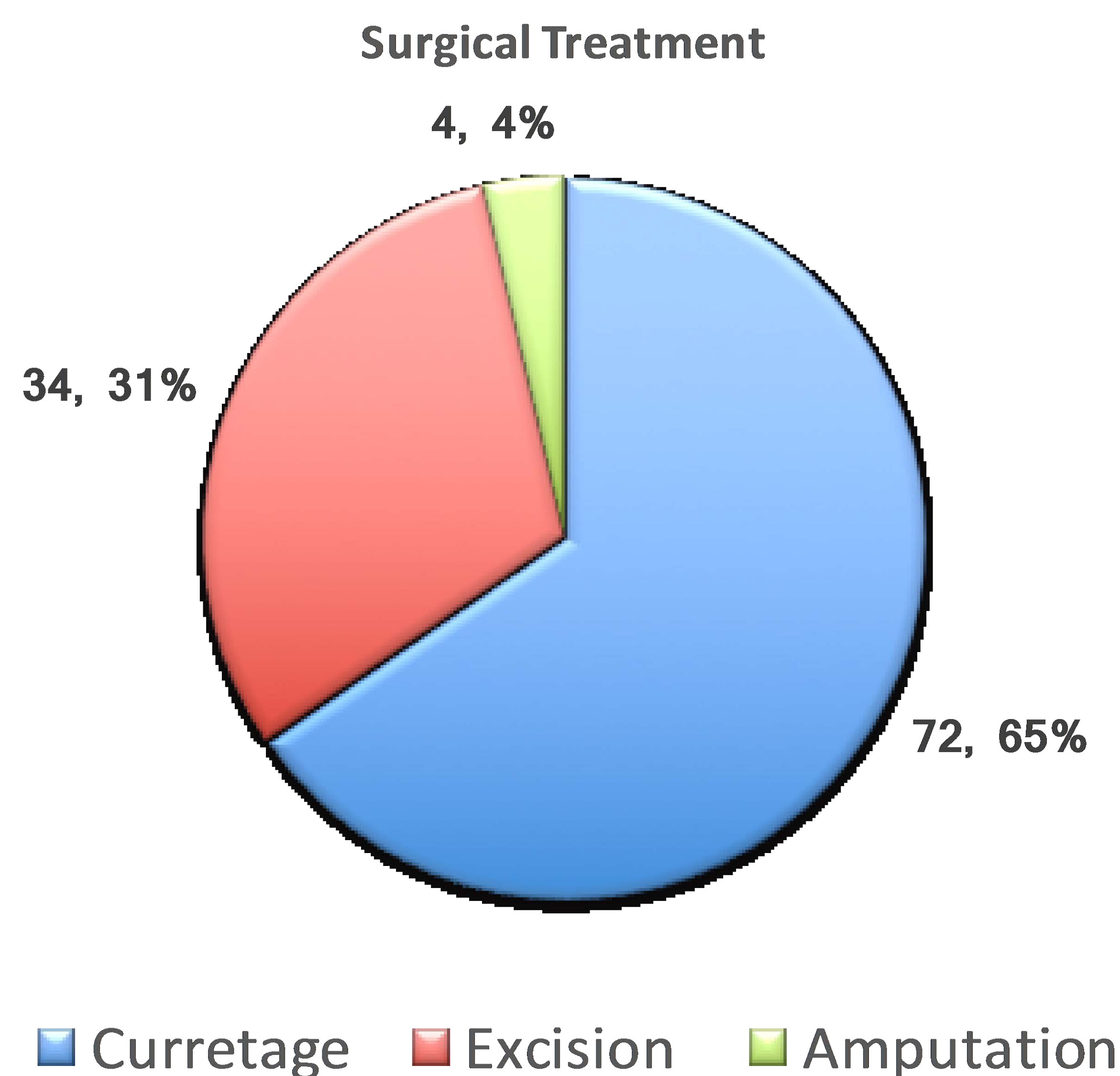
### Study population (n=112):

- Age (median): 40.5 yr (30.3-51.2)
- Male: 48 (43%)
- Pathologic fracture: 50 (45%)

### Distribution of tumor location



Phalangeal enchondroma



## 3. Results

### Diagnosis:

- Benign 87 of 112
  - 71% Enchondroma
- Malignant 15 of 112
  - 14/15 Chondrosarcoma

### Recurrence:

- Overall: 11 of 112 (9.8%)
  - Benign: 7.8%
  - Malignant: 26.7%

## 4. Conclusion

1. Bone tumors of the phalanges and metacarpals are rare and appear to be less aggressive compared to other locations.
2. Malignant histology was associated with recurrence.
3. Pathologic fractures were not associated with recurrence in this study.
4. A two-stage surgical treatment approach is reasonable for a pathologic fracture in a benign appearing lesion in the hand and a single-stage treatment may be preferred in a more aggressive appearing lesion in the hand.

Table 1: Bivariate Analysis

	No recurrence (n=101)	Recurrence (n=11)	P-value
Pathologic fracture, n(%)	47 (47)	3 (27)	0.34*
Tumor type, n(%)			<b>0.040*</b>
Benign	90 (89)	7 (64)	
Malignant	11 (11)	4 (36)	
Treatment type, n(%)			0.38*
Curettage	66 (67)	6 (55)	
Excision	30 (30)	4 (36)	
Amputation	3 (3)	1 (9.1)	
Staged treatment, n(%)			0.56*
Single-staged	13 (28)	0	
Two-staged	34 (72)	3 (100)	

\* Using a Fisher's exact