

# Pilot study of the pragmatic use of mobile phone based follow up of actinic keratoses treated with topical 5-fluorouracil

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## INTRODUCTION

Teledermatology is a growing field within dermatology that has started to adopt the use of mobile phone technology.<sup>1</sup> Teledermatology has allowed greater access to care in inpatient and outpatient settings.<sup>1,2</sup> Diffuse actinic damage is typically treated with field therapy<sup>3</sup> that involves the use of topical 5-fluorouracil (5-FU). Patients are advised to apply 5-FU twice daily for 2-4 weeks.<sup>4</sup> Many patients note misunderstanding with these instructions.<sup>5</sup> Typical actinic keratoses (AK) follow up has included telephone based grading and in person follow up.<sup>4</sup> Telephone conversations are not based on a physical exam and thus do not allow for objective evaluation of the treatment area. A return visit to clinic can be burdensome to the patient and reduce access to care for new patients as the clinic fills up with follow up appointments. This study uses mobile phone photography to evaluate patients with AKs on topical 5-FU treatment.

## OBJECTIVES

To assess satisfaction with mobile phone based follow up in patients with AKs who have been prescribed topical 5-FU therapy as part of their standard of care.

To assess the difference in the number of total treatment doses and clinic contacts between teledermatology and control group.

## METHODS

### Study Design:

Randomized Controlled Trial (RCT)

- Group assignment: pre-randomized with allocation concealment.

### Study population:

- Subjects aged  $\geq 18$  who have been prescribed topical 5-FU for treatment of scalp, facial, arm, or hand AKs but have not initiated treatment yet.
- Recruited from UC Davis Dermatology Clinic.

## PRELIMINARY RESULTS

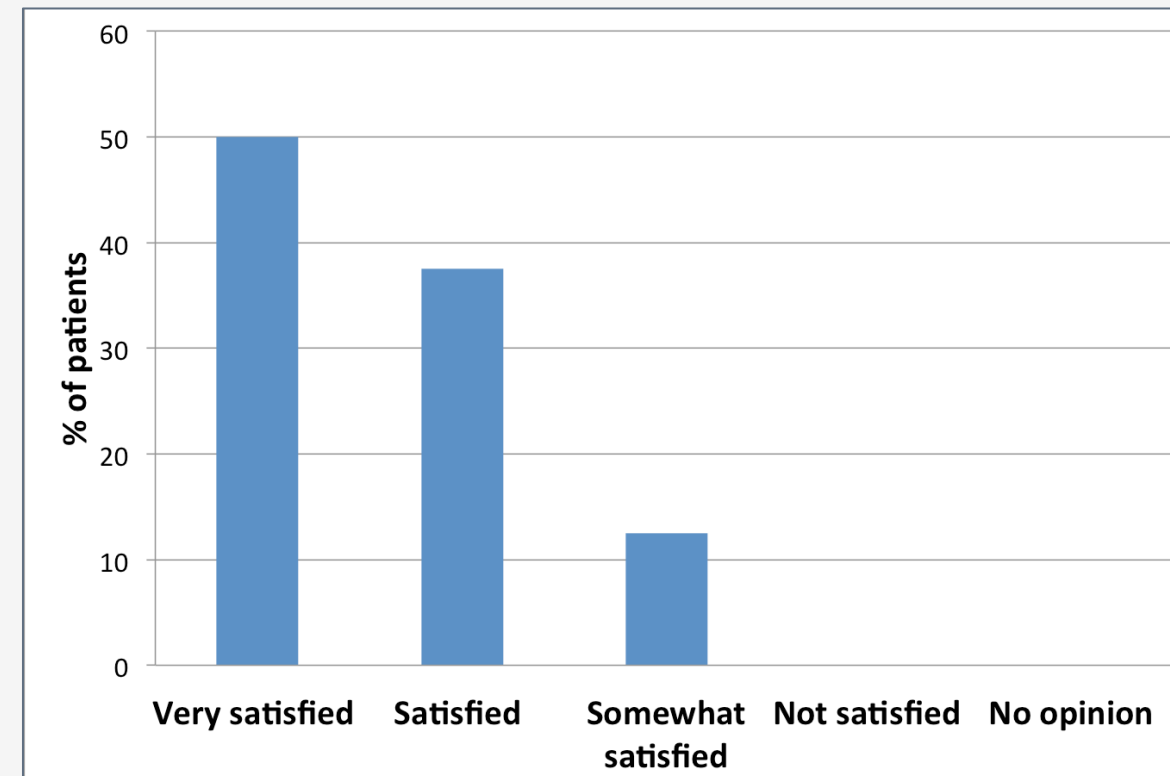


Figure 1. Patient satisfaction with mobile phone photography for AK treatment follow up (N=8).

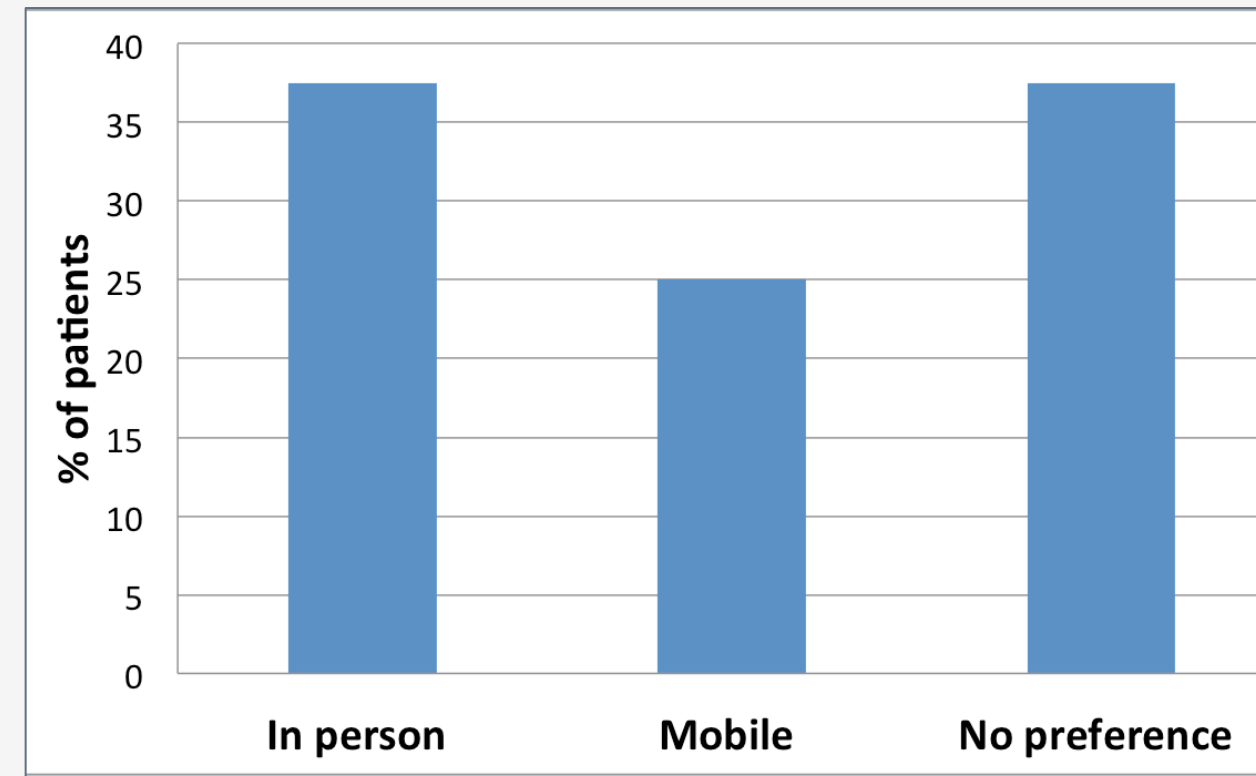


Figure 2. Patient preferences for treatment follow up (N=8).

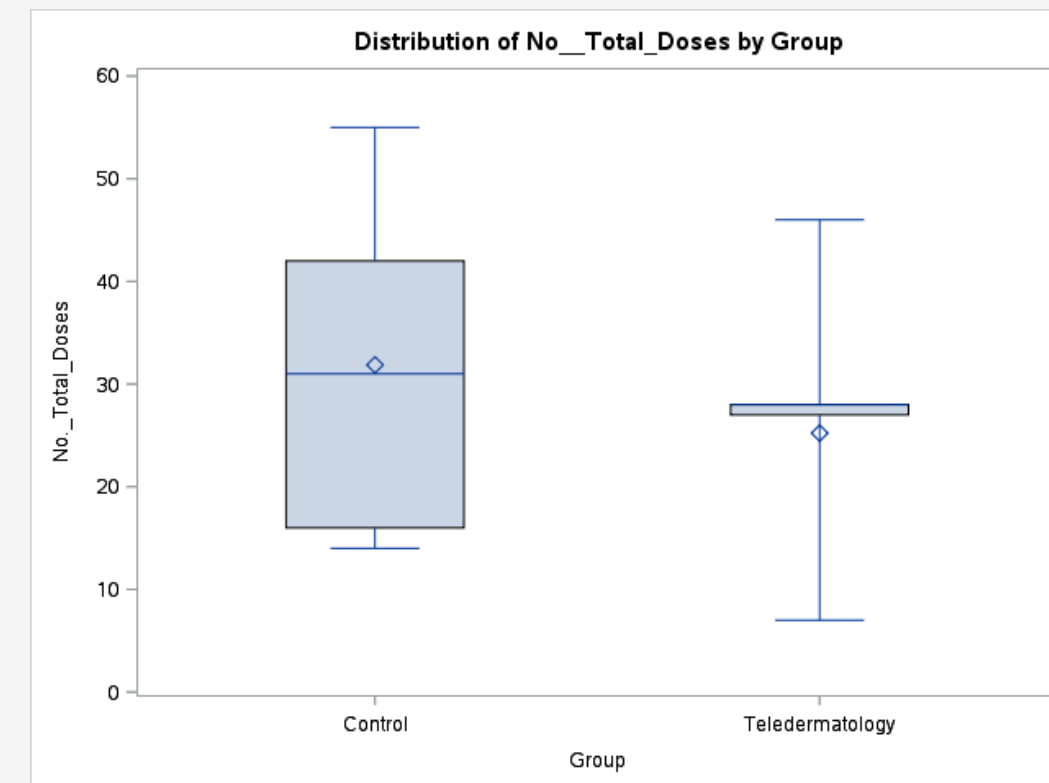


Figure 3. Distribution of number of total doses by group (p=0.33).

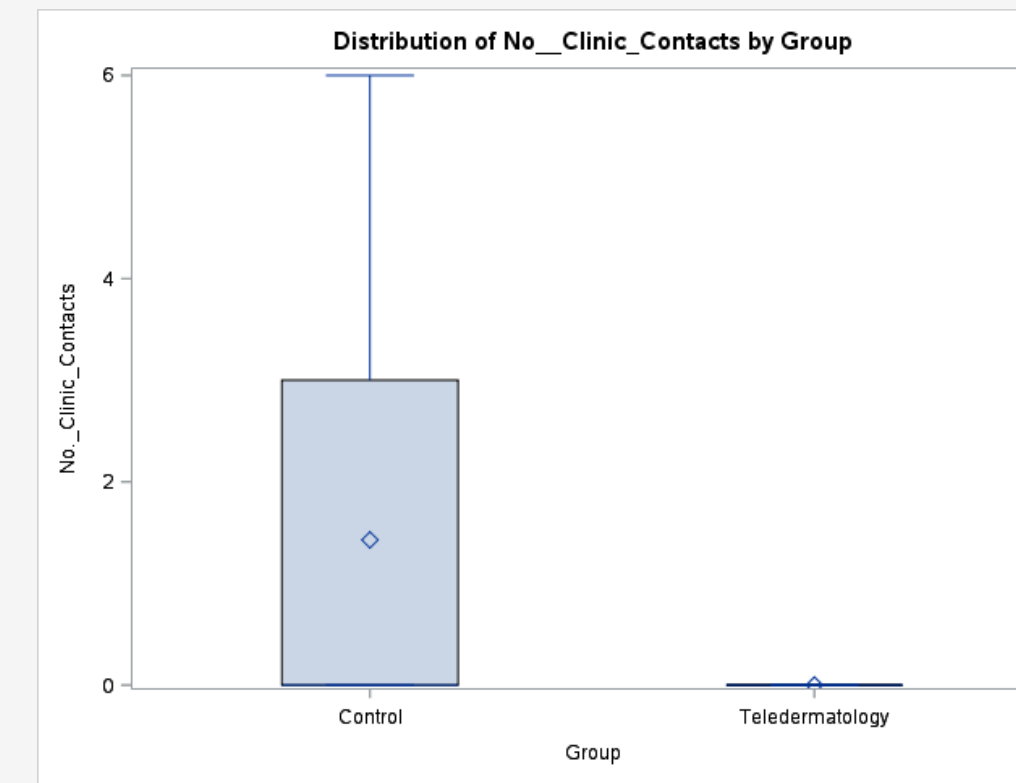


Figure 4. Distribution of number of clinic contacts by group (p=0.08).



Figure 5. Facial mobile phone photographs (week 2 & 8).

Table 1. Patient characteristics.

	Control (N=7)	Telederm (N=9)	p-value
Age*	65.2±5.1	65.2±6.3	0.98
Male gender	7 (100%)	9 (100%)	
Baseline AKs*	15.1±10.5	22.1±13.2	0.27
Week 8 AKs*	1.3±1.5	5.5±8.8	0.46
No. total doses*	31.9±14.4	25.2±11.7	0.33
No. clinic contacts*	1.4±2.3	0	0.08

\*Mean±SD

## METHODS

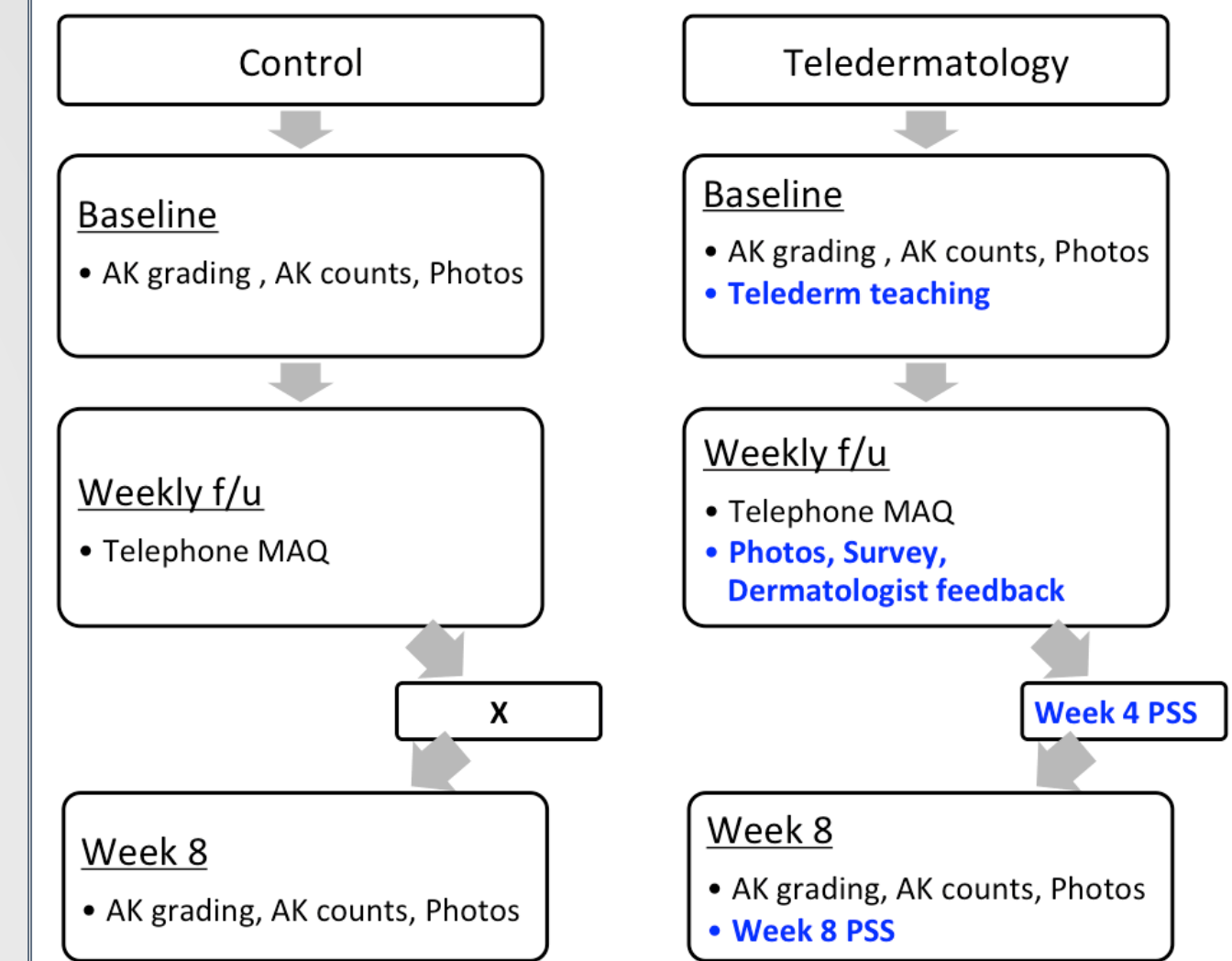


Figure 6. Study design. (MAQ: Medication Adherence Questionnaire; PSS: Patient Satisfaction Survey)

## CONCLUSION

- All patients are at least somewhat satisfied with the use of mobile phone photography for AK follow up.
- The majority of patients still prefer in-person follow up.
- There is no significant difference in the number of total treatment doses or clinic contacts between teledermatology and control group.

## REFERENCES

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