# EFFICACY AND TOLERABILITY OF 5% 5-FLUOROURACIL CREAM AND 5% IMIQUIMOD CREAM IN THE MANAGEMENT OF ACTINIC KERATOSES ON THE FACE AND SCALP

# ABSTRACT.

Introduction: Actinic keratoses (AK) are common sun-induced skin lesions which have the potential to develop into squamous cell carcinoma. Treatment options for eradication of AKs include liquid nitrogen and topical therapies such as 5-fluorouracil (5-FU) and imiquimod. We conducted a study to compare the efficacy and tolerability of 5% 5-FU cream and imiquimod 5% cream in patients with AK on the face and scalp.

Method: 36 patients (age range 18-64 years) with at least 4 actinic keratoses on the face or scalp were randomized into two treatment groups in this investigatorblind study. Group I (n=19 patients) applied 5% 5-FU cream to their AK lesions twice-daily for 4 weeks. Group 2 (n=17 patients) applied imiquimod 5% cream to their AK lesions twice-weekly overnight for 16 weeks. The dosing schedule followed the FDA approved product labeling for each product. All patients were clinically evaluated, photographed and had AK lesion counts performed at baseline and months 1, 2, 3, 4, and 6, followed by long-term follow-up performed I year post-therapy completion. The number and appearance of lesions were evaluated and adverse events were recorded at each visit. The percentage of patients with complete clearance of AKs two-months post therapy completion were compared between the two groups.

**Results:** After 4 weeks of treatment with 5% 5-FU and a 2-month follow-up, 94% of treated AKs had resolved. Following 16 weeks of 5% imiquimod application and a 2-month follow-up,66% of AKs had cleared (p<.01). Complete clearance occurred in 63% of patients with 5% 5-FU and 24% of patients with 5% imiquimod at 2months post-therapy completion (p<.05). The adverse event profile did not differ significantly between the two therapies. Adverse events reported by most patients in both groups included erythema, crusting, erosion and edema. These adverse events were transient in all cases.

**Conclusions:** In this study, topical 5% 5-FU cream achieved faster and more complete clearance of actinic keratoses as compared to 5% imiquimod cream. The two modalities had comparable adverse event profiles.

# INTRODUCTION

- Actinic keratoses (AKs) are common sun-induced skin lesions which have the potential to develop into squamous cell carcinoma.
- 5% 5-Fluorouracil (5-FU) has been widely used in the treatment of AK for over 30 years with an excellent efficacy and safety profile<sup>1</sup>.
- The topical immune response modifier imiquimod 5% cream has been utilized in the management of AKs.
- We report our clinical experience comparing the efficacy and tolerability of 5% 5-FU cream and imiquimod 5% cream in patients with facial and scalp AK.

# METHODS\_

### Subjects:

N= 36 patients

### **Inclusion Criteria:**

- Good health.
- A minimum of 4 AKs on the face or scalp.

### **Exclusion criteria:**

- Immunocompromised.
- Pregnancy.
- Known allergy to study medication.
- Topical medication use for AK within past 2 months.
- Facial laser treatment within past 6 months.

### Intervention:

- weeks

### **Outcome measures:**

- AK lesion counts were measured at baseline and months 1,2,3,4 and 6, followed by long-term follow-up performed I year post-therapy completion in both groups.
- Photographs of studied AKs were obtained at baseline and all follow-up visits.
- Local adverse events were evaluated at each visit.

- Patient tolerability and degree of erythema

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- Adults between 21 and 64 years old.

- Liquid nitrogen treatment for AK within past 30 days.

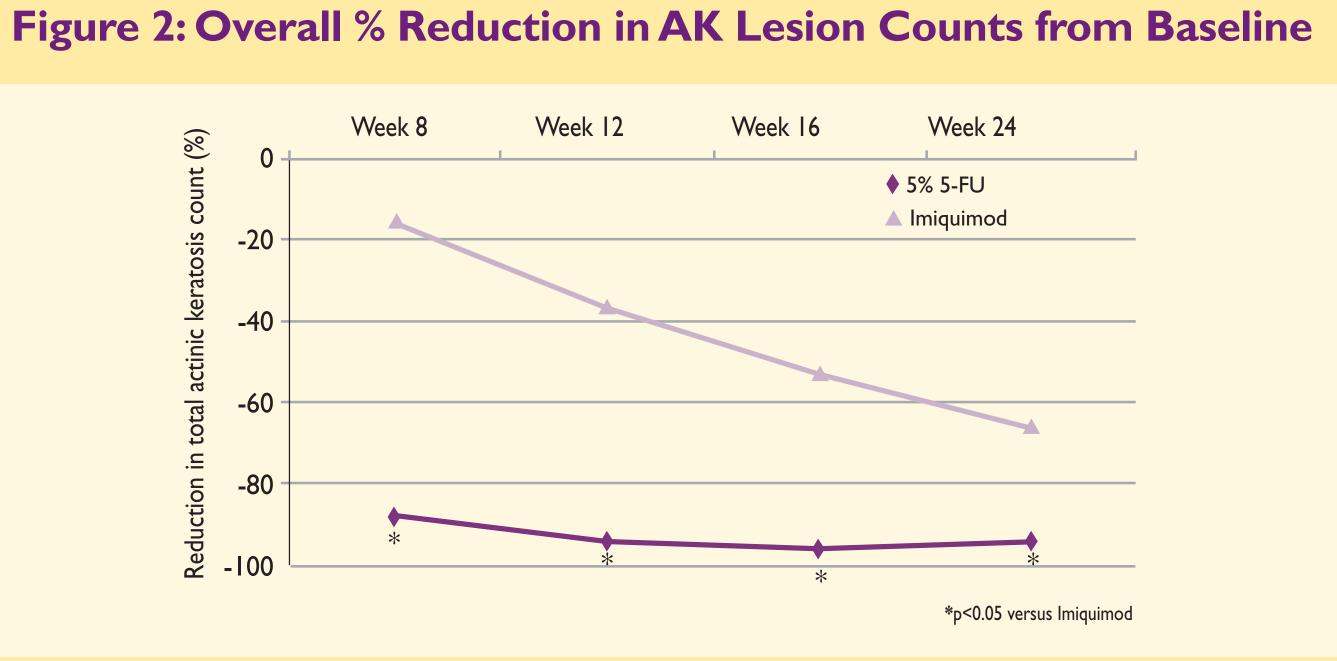
- Group I (N=19 patients).
- 5% 5-FU cream (Efudex<sup>®</sup>, Valeant Pharmaceuticals International) was applied twice-daily to AK lesions for 4 weeks
- Group 2 (N=17 patients).
- 5% Imiquimod cream was applied twice-weekly to AK lesions overnight for 16

- Study endpoints compared between the two groups included:
- Mean reduction in AK lesion count 2 months post-therapy
- Percentage of patients with complete clearing of AKs
- Physician global assessment of improvement

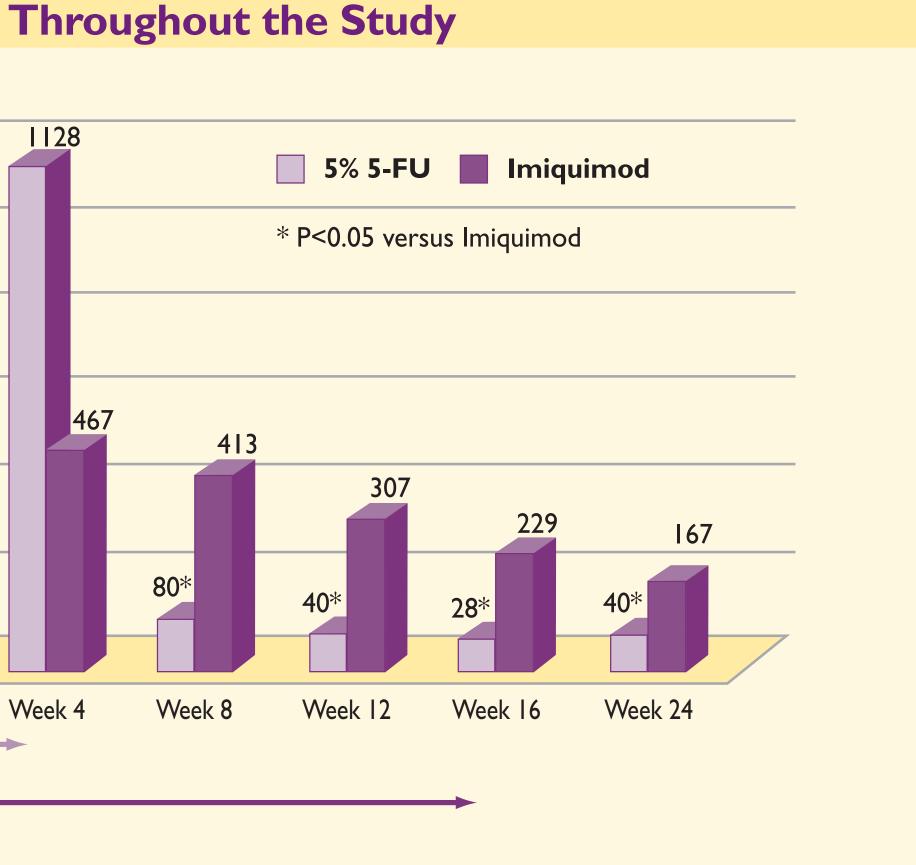
# **RESULTS**.

# Figure I:Total Number of AKs in Each Treatment Group 600 Baseline 5% 5-FU treatment miguimod treatment

• 63% of patients (12/19) achieved complete clearance of all AKs with 5% 5-FU post-therapy completion.



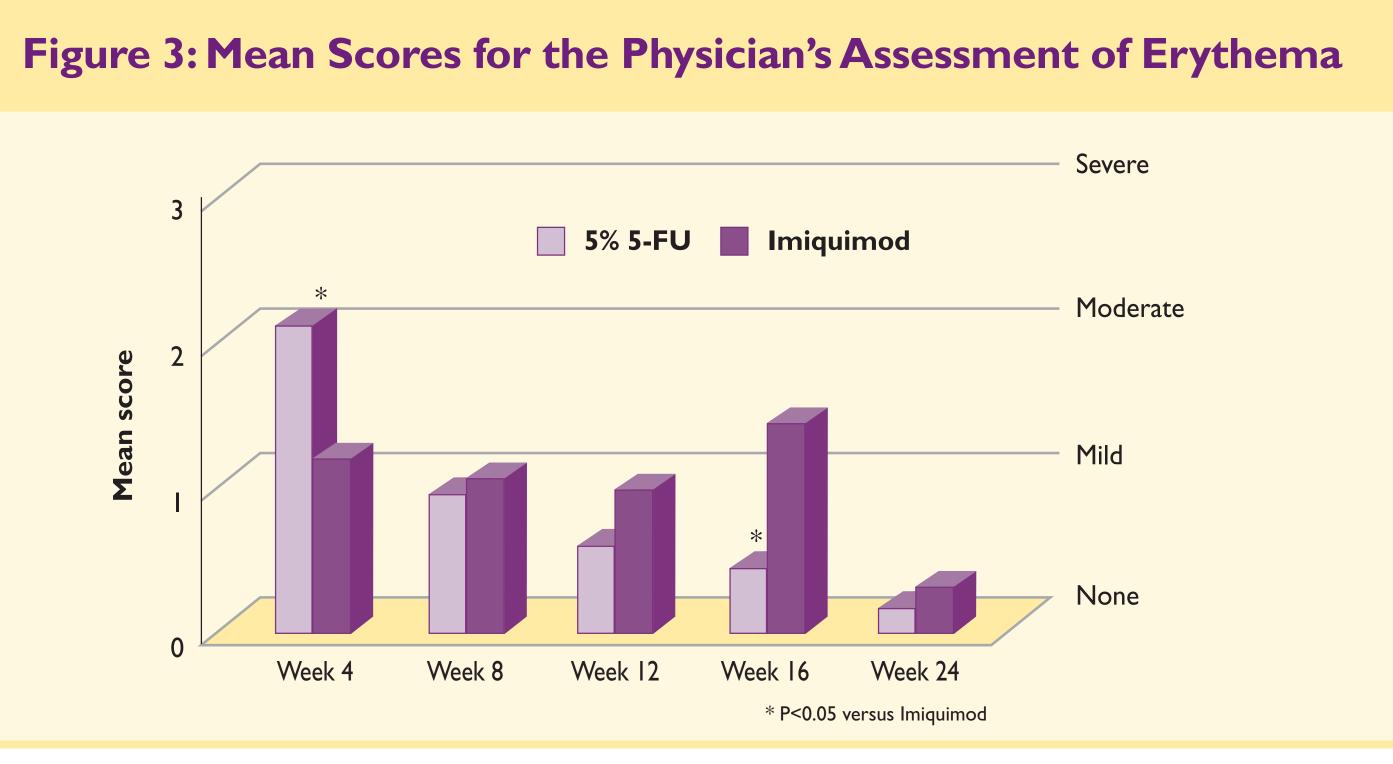
- Patients treated with 5% 5-FU for 4 weeks experienced a mean reduction in AK above).
- Patients treated with 5% Imiguimod for 16 weeks experienced a mean reduction in AK lesion counts of 66% at the 24-week visit (Figure 2, above).
- After I year of post-therapy follow-up, 87% of AKs were still cleared with 5% recurrence rate with both therapies.



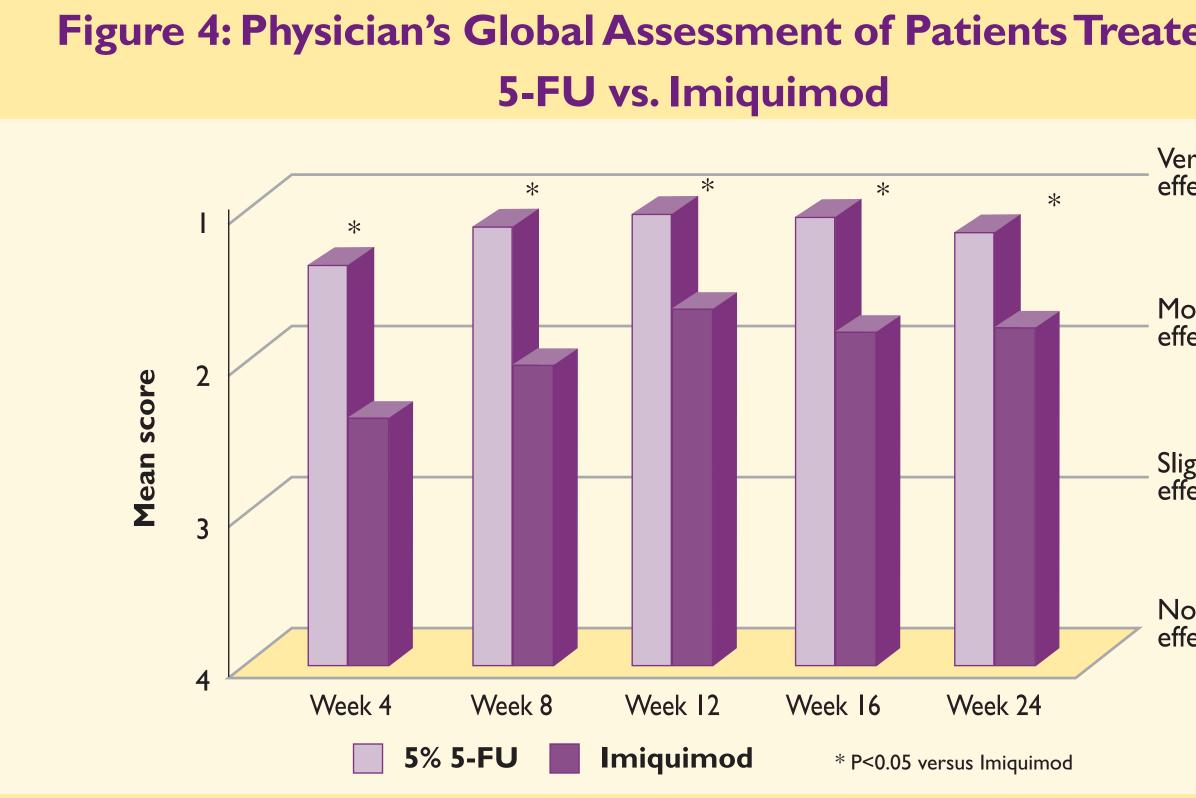
compared to 24% of patients (4/17) with imiquimod, when measured 8-weeks

lesion counts of 88% at the 8-week visit and 94% at the 12 week-visit (Figure 2,

5-FU, whereas 72% of AKs were cleared with 5% imiquimod, indicating a low



- At 4 weeks there was an initially higher rating of erythema reported in patients treated with 5% 5-FU cream compared to the patients treated with imiquimod 5% cream.
- During weeks 8 to 24, the degree of erythema was higher in patients treated with imiquimod 5% cream and this was statistically significant at week 16 (p<.05).



- 5% 5-FU cream was assessed as moderately to very effective.
- 5% 5-FU cream was assessed as more effective than imiquimod 5% cream throughout the study.

Very effective

Moderately effective

Slightly effective

# CONCLUSION\_

• In this st	tudy, topical	5% 5-FU	cream	applied for	or 4	weeks	was	shown	to	have
superior efficacy to imiquimod 5% cream applied for 16 weeks.										

- The two treatments did not differ significantly in adverse event profile.
- Initial AK clearance rates were maintained with both modalities for 1 year posttherapy completion, indicating a low recurrence rate with both therapies.

## REFERENCES

<sup>1</sup> Jeffes E and Chen J. New approaches to the treatment of actinic keratosis. American Journal of Cancer. 2003; 2(3):151-168.

## **DISCLOSURE OF SUPPORT**

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