

Dermatologists' Awareness and Attitudes Toward Oral Nicotinamide for Chemoprevention of Non-Melanoma Skin Cancer and Actinic Keratoses: A Cross-Sectional Survey

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INTRODUCTION

- Skin cancers are the most common malignancies.^{1,2} Fortunately, skin cancer is also one of the most preventable types of cancer.
- The cornerstone of skin cancer prevention is reducing ultraviolet (UV) radiation exposure.
- Currently, mainstay pharmacological chemoprevention includes the use of topic creams such as, 5-fluorouracil, ingenol mebutate, diclofenac 3% gel, and imiquimod.³
- Recent studies have investigated the role of oral photo protectors and their role in systemic protection against the effect of UV.⁴ These oral agents work using antioxidant, anti-inflammatory and/or immunomodulatory effects to prevent UV-induced carcinogenesis and aging.
- Nicotinamide (NAM), an amide form of vitamin B3 (niacin), has been a particular oral agent of interest because it has been demonstrated to significantly reduce the number of non-melanoma skin cancers and actinic keratosis in patients.⁴
- NAM can be derived from dietary sources such as meats, legumes, nuts, green leafy vegetables, and cereal.⁵
- **There is a gap between clinical evidence supporting the nicotinamide chemoprevention and its adoption into dermatology practice. Understanding physician awareness of and barriers is essential to improving implementation and patient outcomes.**

AIMS & OBJECTIVE

- Aim 1: Assess dermatologist's awareness of evidence supporting oral nicotinamide use for chemoprevention.
- Aim 2: Evaluate dermatologists' prescribing patterns and attitudes towards nicotinamide use.
- Objective: Identifying barriers and concerns that limit the integration of nicotinamide into routine clinical practice.

METHODS

- A cross-sectional, anonymous survey was developed using Qualtrics was distributed electronically via the Michigan Dermatological Society
 - Inclusion criteria: board-certified dermatologists practicing more than one year and spending at least 25% of their time in direct patient care
- Survey consisted of a series of multiple choice questions, likert-scale items and open ended responses. Data collected included:
 - Demographics and practice characteristics
 - General knowledge of skin cancer prevention
 - Awareness of literature supporting nicotinamide use
 - Frequency of nicotinamide prescription
 - Perceived barriers to implementation
 - Concerns surrounding nicotinamide use

RESULTS

Despite 100% awareness of evidence supporting the benefits of nicotinamide use, routine recommendations rates varies with multiple barriers and concerns that limited clinical implications

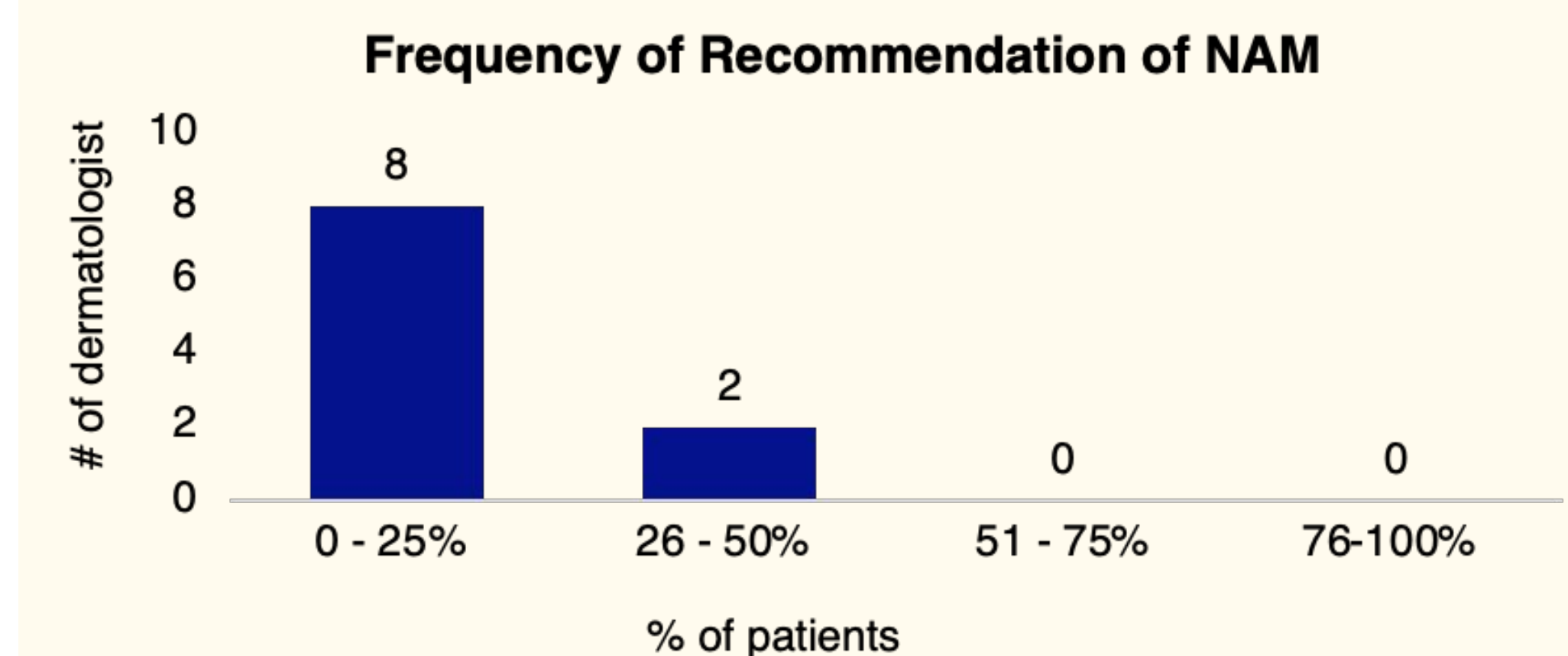


Figure 1. Frequency of dermatologists' recommendation of NAM for chemoprevention for patients with history of NMSC or AK (n=10)

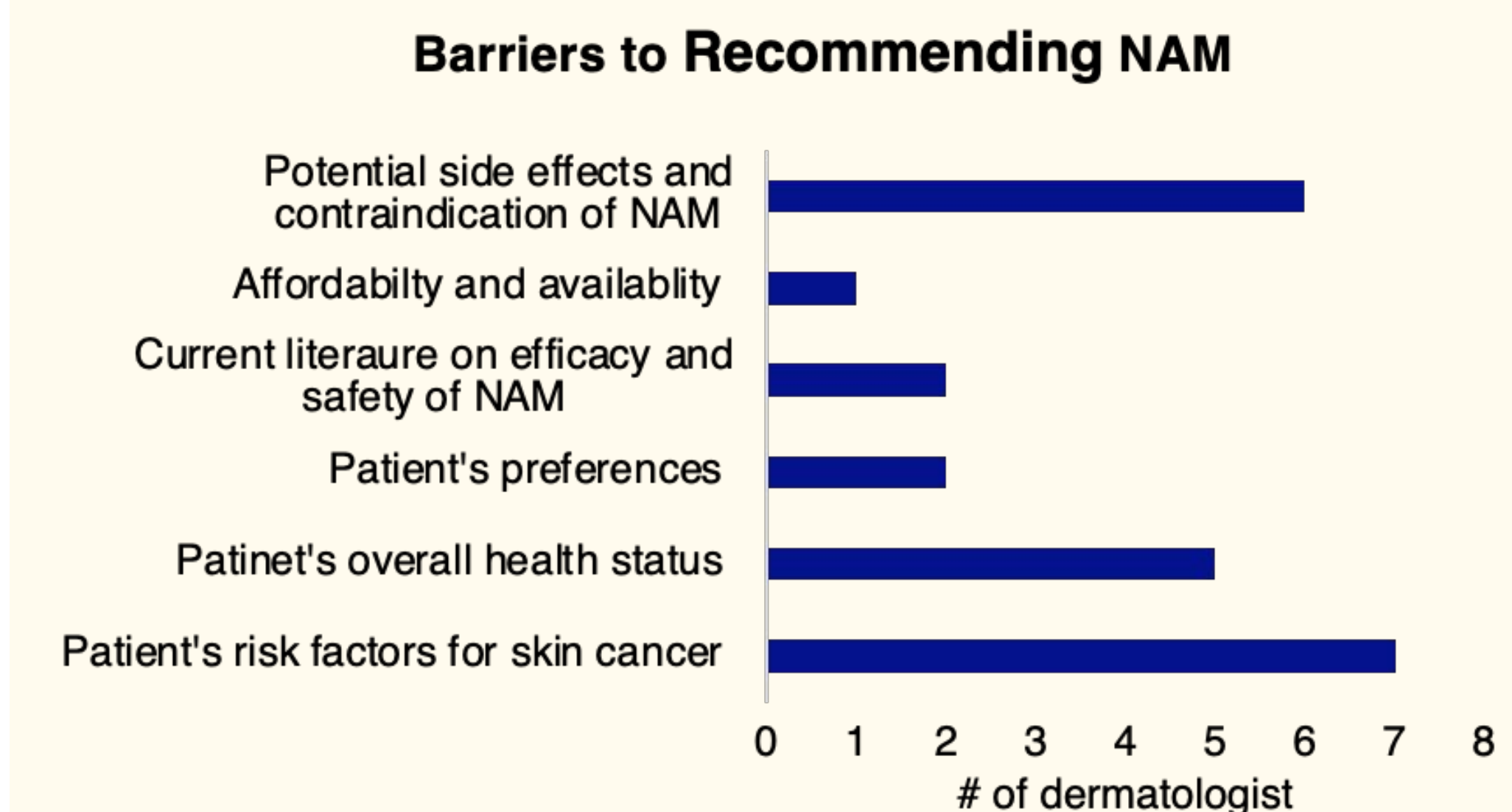


Figure 2. Reported barriers to recommending oral nicotinamide (n=10)

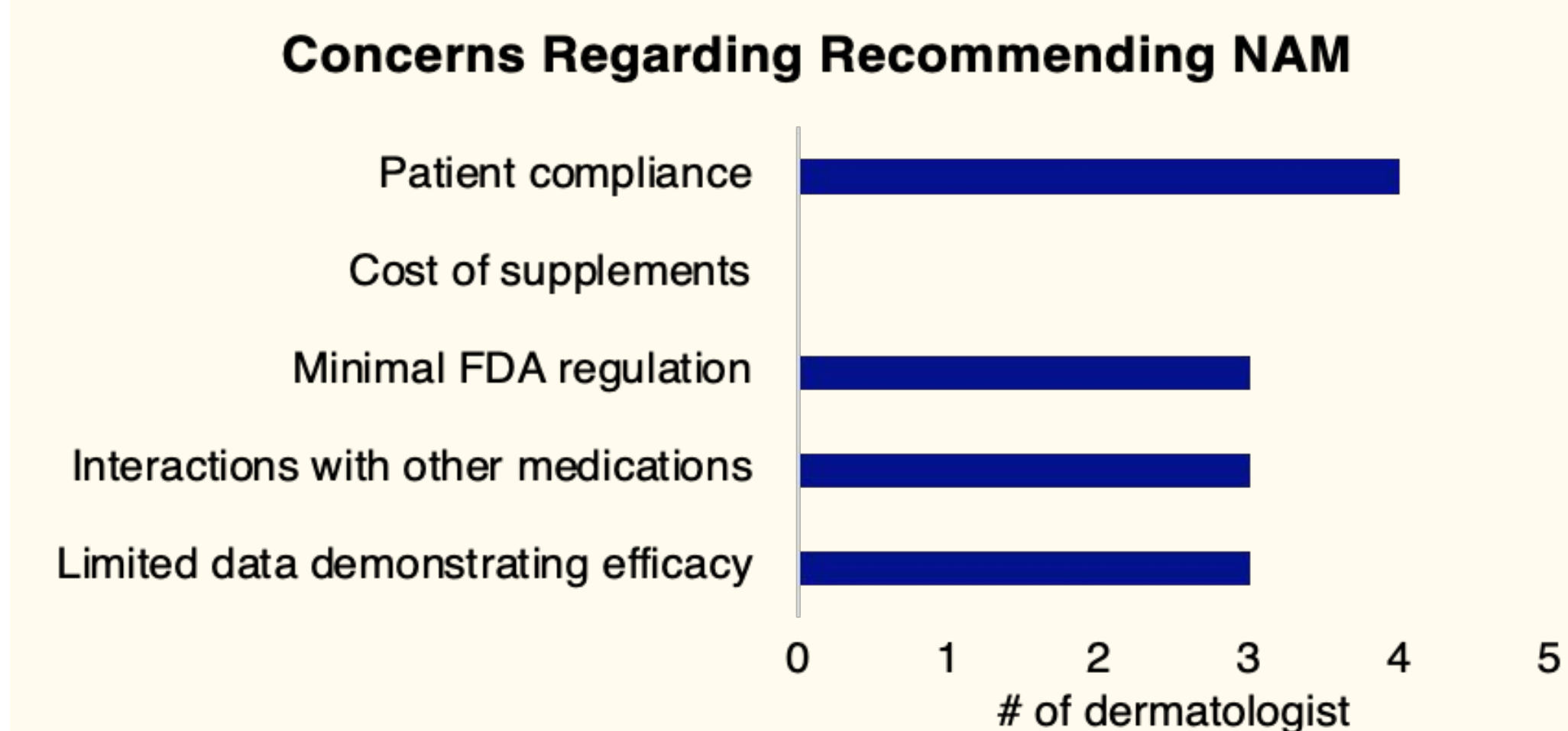


Figure 3. Concerns regarding recommending oral nicotinamide (n=10)

CONCLUSIONS

- Dermatologists demonstrated high awareness oral nicotinamide and its potential use for skin cancer chemoprevention, however clinical implications of this data reminds inconsistent.
 - Most cited factor for recommending nicotinamide was the individual patient's risk factors for skin cancer.
 - Key barriers include limited data demonstrating efficacy, concerns for drug interactions, and minimal FDA regulation.
- This study was limited by small sample size (n=10) and regional sampling which may limit the generalizability
- Clearer clinical guidelines and increased research to address physician concerns may facilitate broader integration of nicotinamide into routine dermatologic practice.
- **Our study demonstrated that dermatologists are aware of nicotinamide benefits, but implementation remains poor due to practice barriers and concerns rather than lack of knowledge.**

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