Thesis Title	The Efficacy of Home Use Intense Pulsed Light (IPL) for the Improvement of Keratosis Pilaris
Author	Kanin Teerawatanapong
Degree	Master of Science (Dermatology)
Advisor	Sirintip Chaichalotornkul, Ph. D.
Co-Advisor	Assistant Professor Tawee Saiwichai, Ph. D.

ABSTRACT

Background: Keratosis pilaris (KP) is a chronic dermatological condition characterized by follicular papules with hyperkeratosis and varying degrees of erythema and hyperpigmentation. Although asymptomatic, its cosmetic impact often motivates treatment. Traditional treatments, including topical agents and in-clinic laser therapies, can be costly and inconvenient. Home-use intense pulsed light (IPL) devices provide a potential alternative for safe, convenient management of KP.

Objective: To evaluate the efficacy and safety of a home-use IPL device in improving skin roughness, erythema, and hyperpigmentation in patients with keratosis pilaris.

Methods: This randomized, single-blind, split-area controlled trial enrolled 18 participants aged 18–40 years with KP on the extensor surfaces of their upper arms. Treatment areas were randomized to receive either weekly IPL sessions or sham irradiation for four weeks. Skin roughness, erythema, and hyperpigmentation were assessed objectively using Visioscan® VC 98 and Mexameter® MX18 devices at baseline, during treatment, and at follow-up (week 8). Subjective evaluations included the Global Improvement Score (GIS) and patient satisfaction surveys. Adverse effects were monitored throughout the study.

Results: Ten participants completed the study. Statistically significant improvements in skin roughness were observed in treatment areas compared to control areas ($p < 0.05$). No significant differences were found in erythema or hyperpigmentation between groups. Participants reported high satisfaction levels and noticeable cosmetic improvement in treatment areas, with no severe adverse events reported.

Conclusion: Home-use IPL devices are a safe and effective option for improving skin roughness associated with keratosis pilaris, offering a convenient alternative to traditional in-clinic treatments. Further research is recommended to assess long-term efficacy and broader applicability across different skin types and ethnicities.

Keywords: Keratosis Pilaris, Intense Pulsed Light, Home-use IPL, Skin Roughness, Erythema, Hyperpigmentation