



## 難治性皮膚疾患への紫外線デバイス

*Phototherapy device for the treatment of refractory skin diseases*

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### Keywords

エキシマライト  
ナローバンド UVB  
PUVA  
制御性 T 細胞  
深紫外光 LED

### Summary

Ultraviolet phototherapy is used for refractory skin diseases when topical treatment is not effective. Ultraviolet light (UV) phototherapy using narrowband UVA (311–313 nm) is a well-established treatment for refractory skin disease, such as psoriasis and atopic dermatitis. Selective wavelength phototherapies are becoming popular and are used to minimize the carcinogenic risks of UV exposure. Excimer light (308 nm) therapy effectively targets affected skin without undue exposure of other areas. Fewer treatments and a lower cumulative UVB dose are other advantages of excimer light; the greater carcinogenic risk is ameliorated by the reduced number of treatments needed. Based on the action mechanisms, i.e., induction of apoptosis and regulatory T cells, phototherapy effects have led to several improvements in the design, protocols and light sources as UV-LED, providing several options to patients with skin disease.

### はじめに

太陽光に含まれる紫外線には、皮膚疾患の改善や皮膚の健康を守る働きがあることが知られていた。1903年、デンマーク人であるニールス・フィンセン (Niles Finsen) は、尋常性狼瘡(皮膚の結核感染症)に対する光線療法で、医学に新しい道

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