

Universiti Teknologi MARA

**Diagnosis of Acne Vulgaris on Face Using
Fuzzy Expert System**

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ABSTRACT

Acne issue especially acne vulgaris causes embarrassing, excruciating, social withdrawal, suicide, physiological and enthusiastic trouble if left untreated. Ordinarily, a dermatologist uses physical examination and lesion counting to diagnose acne. These methods are very time consuming, expensive and had a problem to standardize the grading of acne. Thus, an intelligent and accurate diagnostic system is needed in order to treat it. This project is implemented Fuzzy Expert System (FES) in detecting the severity of acne vulgaris. FES is chosen because it can model ambiguous information, an ability to reason uncertainty and imprecision of acne vulgaris information given by dermatologist during the diagnosis process. This project aims to identify the severity of acne vulgaris problem using FES algorithm and attempts to help users to diagnose acne vulgaris without taking a clinical test. Furthermore, it can be an assisting tool for an expert to diagnose acne. Thus, it can save time and cost to diagnose acne. The FES algorithm will process five input fields such as cysts, nodules, papules, pustules and comedones, and then produced one output fields which is the level of severity of acne. The project implemented based on proposed methodology approach. Hence, the result will show in the percentage that represents the severity of acne. Hopefully, this project could proceed by diagnosing other type of acne and another part of the body in the field of FES.

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