ABSTRACT

Nowdays cancer is still a very dreaded disease because it causes death at various ages. Skin cancer is one of the most dangerous cancers. In Indonesia, skin cancer cases ranked third after cervical cancer and breast cancer for women while in men the skin cancer cases ranked second after lung cancer. Therefore, we designed a skin cancer detection application with image processing and expert system that is useful for early detection risk of a person getting skin cancer based on the condition of a nevus it has. This system uses image processing with Hue saturation Lightness (HSL) and Hue Saturation Value (HSV) to assess the state of a nevus based on ABCD) parameters (Asymmetrical, Border, Color, Diameter. The results of this image processing will be a preliminary examination (Screening test) of whether the nevus is issued or not become malignant / cancer nevus. Continued by a deeper examination with expert systems of perceived symptoms by patients, which are divided into Low Risk, Medium Risk and High Risk. The results of the application showed 100% accuracy for dermoscopy resolution images, 85% for dermoscopy resolution images taken using the camera and 50% using a camera equipped with a microscope. The results are obtained from validation performed by dermatologist.

Key words :*Image Processing, Hue saturation Lightness* (HSL), *Hue Saturation Value (HSV).*