Classification of several skin cancer types based on autofluorescence intensity of visible light to near infrared ratio / Aryo Tedjo, Surya Dwira, Anwar S Ibrahim, Rino Patiatta, Kusmardi

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Abstrak

Skin cancer is a malignant growth on the skin caused by many factors. The most common skin cancers are Basal Cell
Cancer (BCC) and Squamous Cell Cancer (SCC). This research uses a discriminant analysis to classify some tissues of
skin cancer based on criterion number of independent variables. An independent variable is variation of excitation light
sources (LED lamp), filters, and sensors to measure Autofluorescence Intensity (IAF) of visible light to near infrared
(VIS/NIR) ratio of paraffin embedded tissue biopsy from BCC, SCC, and Lipoma. From the result of discriminant
analysis, it is known that the discriminant function is determined by 4 (four) independent variables i.e., Blue LED-Red
Filter, Blue LED-Yellow Filter, UV LED-Blue Filter, and UV LED-Yellow Filter. The accuracy of discriminant in
classifying the analysis of three skin cancer tissues is 100 %.