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## Applications of computer vision techniques for medicine

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The development of computer vision techniques nowadays plays a very important role in the development of many fields of medicine. One of the most favored fields is the rapid diagnosis of diseases. Among the applications that use computer vision techniques, some are designed to provide medical professionals with relevant characteristics to make decisions, while others are fully automatic diagnostic systems. Diagnostic applications are subject to levels of sensitivity and specificity accepted by the medical community, to guarantee the quality required for their use. However, regardless of the quality of the applications, they are used under the supervision of the professionals and their results help to make informed decisions. In the NIDTEC we have developed the research: computerized medical diagnosis of melanocytic lesions based on the ABCD approach. In this research, a dermatoscopic image is received; it is processed to extract visible melanoma characteristics established in the ABCD medical technique. Subsequently, we establish an automatic prognosis based on these characteristics (skin cancer diagnosis). Another field of use is given in the search for new drugs. In this context, the research group has developed a tool that calculates the cellular infection rate of Chagas disease. This tool counts the number of *T. cruzi* parasite in the amastigote form in microscopic image of cells before and after trying a new drug to determine the efficiency of the drug for the cure of Chagas disease. This process saves the counting time from days to minutes.

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