A new segmented and annotated colposcopy image set, image mapping necessary for the conization of the cervix

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It is well known that cervical cancer is the fourth most common cancer among women, and the proper diagnosis of this disease still remains a difficult challenge around the world. Considering the latter, colposcopy images are crucial in the diagnosis of cervical cancer. Given the fact that recognition of the cancerous lesions is not a simple task, there are some attempts for the development of malignant lesion recognition software based on machine learning algorithms. It must be taken into account that colposcopy image data sets are usually small with restricted amount of valuable data leading to a limited training capacity. In our paper we present a new colposcopy image set that can be used for cervical mapping. At the same time the segmentation and annotation of these images were made in order to prepare data for machine learning algorithms. In addition, this paper discusses some image enhancement techniques as well. As the proper analysis of colposcopy images of cervical malignant lesions depends primarily on the quality of the images taken, this topic is even more important when several doctors are discussing the diagnosis of a patient within the framework of telemedicine.

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