

In the project we propose to create an advance, simple, cost effective and reliable system for early diagnosis of prostate cancer. The method will also enable us to discriminate aggressive forms of prostate cancer from the non aggressive forms. The diagnostic system could be placed at any clinic for prostate cancer diagnosis. This system will not require special skills or experience from the personnel. The methodology is based on the fact that near infrared light passes through biological tissues. The method is based on infrared spectroscopy including polarization. As a infrared light sources will be selected different sources: light emitted diodes, halogen light sources etc. Charge-coupled device (CCD) camera connected to the computer will be used as a detector of infrared images of prostate tissues. Special software will be developed for analysis of prostate infra-red data and will provide an opportunity to obtain prostate infrared PC images. These software would allow distinguishing differences between images of cancerous and noncancerous tissues and identify the location of the cancer.