

ABSTRACT

This bachelor thesis is focused on tumor diseases of the colon, especially on the processing of biopsy material obtained by sampling during colonoscopy and colectomy.

The theoretical part of this thesis describes general anatomy of the colon and assumptions of tumor formation in this location. It deals mainly with the risk factors which may be unaffected, e.g. heredity and age, but also affectable, such as insufficient physical activity, excessive consumption of red meat, low fiber intake, smoking, alcohol consumption, overweight etc.

The thesis also describes the possibility of prevention, which is closely related to the risk factors. Finally, some ways of taking biopsy samples and subsequent laboratory processing are listed.

The practical part presents the methods used for tissue processing and staining histological slides with a focus on the advantages of faster tissue processing by continuous tissue processor. It also deals with immunohistochemical examination, which is an integral part of histopathological diagnostic procedure.

The aim of the thesis was to describe how certain methods of histological processing can accelerate and especially clarify the diagnosis and the associated follow-up treatment.

Keywords: colon , colorectal cancer, pathology , cancer , colonoscopy, colectomy, hemicolectomy, histological processing , microscopic analysis, immunohistochemical analysis.