

## **ABSTRACT**

The bachelor thesis summarizes the existing knowledge about circulating tumour cells (CTC) and their use in the diagnosis and treatment of breast cancer. First is presented a chapter about cancer in general. The following chapter deals with breast cancer, its etiology including genetic factors and other risk factors for its formation. Furthermore, there are types of breast cancer in women and men and the possibilities of their diagnosis and imaging methods. The next part is devoted to CTC, their definition and role in metastatic and primary breast cancer. Due to their low concentration in the blood of patients, special methods have been developed for their identification and detection. These methods are summarized in the following chapter. The number of CTCs in the blood of patients with breast cancer has a significant prognostic significance in the diagnosis and treatment by doctors, so it is important to monitor the current knowledge so that they can get into the common practice of cancer treatment as soon as possible.

**Key words:** cancer, breast carcinoma, circulating tumour cells, diagnosis