

## Abstract

The subject of presented bachelor thesis is an analysis of efficacy and side effects in chemoradiotherapy of anal canal cancer. High anticancer activity besides severe adverse effects are specific for anal canal cancer. Adverse effect may finally negatively influence even overall survival. The data of 110 patients treated within the last 20 years at the Institute of Radiation Oncology, University Hospital Na Bulovce, Prague were analyzed to determine an impact of radiation delivery technique, chemotherapy and other variables on treatment results. Common chemoradiation regimen of mitomycin + 5-FU and radiation up to 60 Gy was employed.

The single-institution data confirm high efficacy of standard treatment in terms of survival and relapse rate. There is a substantial rate of acute and delayed toxicity. Therefore there is a significant reduction of chemotherapy in elderly patients. However the survival and time to relapse data do not significantly differ in elderly patients. The age at diagnosis as a continuous variable does not significantly influence either survival or time to relapse. More advanced radiation delivery technique IMRT brings significantly less side effects compared to classic 2D and 3D conformal radiation therapy.

Conclusions: High toxicity of standard chemoradiation for anal canal cancer may be reduced if IMRT technology of radiation delivery is employed. However in elderly patients toxicity may be reduced also by chemotherapy exclusion since good treatment results seem unchanged.