The submitted thesis is based on comparison of therapeutical effectivity of two different methods using in multiple myeloma patients for therapy. The best therapy seems to be single or tandem autologous stem cell transplantation ASCT with stimulation and separation of periferal blood stem cells (PBSCs). The stimulation could be done by CFA (cyclofosfamid) or cytostatik combina¬tion, e.g. IVE (ifosfamide, vepeside, epirubicine) in combination with G – CSF (granulocyte – colony - stimulating factor). The question which is not answered is which one of those methods is more effective. And which one of single or tandem ASCT is more profitable if any.
The goal of the study is to compare two different methods of stimulation and separation of PBSCs (CFA and IVE). I compare the effectivity from a viewpoint of breeding PBSCs and also time consuming of the separation me¬thods. Nobody has done this comparison before us. To separate PBSCs was used COBE Spectra apheresis systém. Spectra is efficient to separate the whole blood into its components.

The group for my study were 167 patients with Multiple Myeloma. Part was stimulated with CFA the other part with IVE. In every one of those groups we compare the number of PBSCs represent by CD34+ cells, type and period of several separation methods and also differences between single and tandem ASCT.

Our study demonstrate that mobilization with IVE seems to be more effe¬ctive for PBSCs breeding then CFA. The yield of CD34+ cells is higher and also the time for IVE separation procedure is shorter. We also demonstrate that there is no significant differencies between single and tandem transplantation.