

Apoptosis is a process of the programmed cell death in response to severe mutations in DNA or cell stress. Apoptosis plays a key role in tissue maintenance by eliminating senescent and damaged cells. Various molecules take part in apoptosis, main participants are Bcl-2 protein family and caspases. The latter one are responsible for apoptosis execution, while Bcl-2 protein family regulates apoptotic pathway. Failure of this regulation may cause several pathologies, including development of neoplastic tissue. Human endometrium is a specific tissue, in which apoptosis is present in cycling pattern. Present study shows expression level of Bcl-2, Bax, Bad, Bid, pro-caspase-3, caspase-3 and PARP in normal, atrophic, hyperplastic and cancerous (Grade I and II) human endometrium. Bad and Bid proteins can be possible breakpoints in neoplastic transfer due to opposite expression in cancerous and hyperplastic endometrium.