

Abstract

BK polyomavirus is small uncoated DNA virus which is ubiquitous in human population. In immunosuppressed individuals can cause severe diseases, specifically BK polyomavirus associated nephropathy (BKVAN) and hemorrhagic cystitis. Except that, it is presumed that BKV may be responsible for some cases of human cancer. Some features of BKV could support this idea. There are three encoded oncoproteins in BKV genome. BKV is oncogenic in rodents, where induces multiple types of tumors and it can transform cell lines as well. Moreover, BKV DNA was found in many types of human cancer. All these facts suggest a possible role of BKV in human cancer. Bladder carcinoma in patients after transplantation and prostate adenocarcinoma are the most likely candidates to link with BKV participation. There is no complete evidence though. Therefore, future studies are necessary to prove or even exclude BKV as a possible cause of human cancer.

key words: BKV, cancer, LTag, prostate, bladder