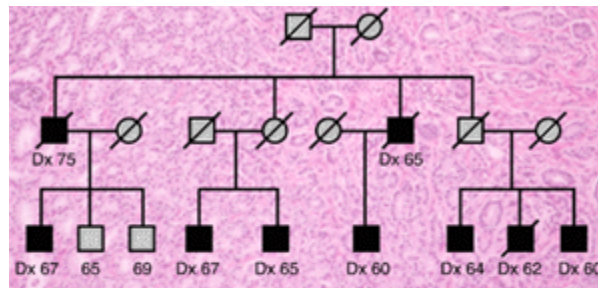# Prostate cancer

Hereditary prostate cancer (HPC) accounts for about 10% of all prostate cancer, and HPC1 is estimated to account for approximately 34% of these hereditary cases.

Background: histological section of a pateint with HPC. Foreground: pedigree of a typical family demonstrating multiple affected individuals (sold boxes) whose disease links to the HPC1 region on chromosome 1.
[With thanks to Jeffrey Trent and colleagues, NIHGR, NIH for supplying the image.]

The second leading cause of cancer death in American men, prostate cancer will be diagnosed in an estimated 184,500 American men in 1998 and will claim the lives of an estimated 39,200. Prostate cancer mortality rates are more than two times higher for African-American men than white men. The incidence of prostate cancer increases with age; more than 75% of all prostate cancers are diagnosed in men over age 65.

Despite the high prevalence of prostate cancer, little is known about the genetic predisposition of some men to the disease. Numerous studies point to a family history being a major risk factor, which may be responsible for an estimated 5-10% of all prostate cancers.

One of the most promising recent breakthroughs may be the discovery of a susceptibility locus for prostate cancer on chromosome 1, called HPC1, which may account for about 1 in 500 cases of prostate cancer. The next step will be to clone the gene. Once researchers have the sequence, they will be able to search the databases to compare the HPC1 sequence to previously characterized proteins from both humans and other animals. This should provide clues as to the function of HPC1 in the cell, and suggest potential starting points to find drug targets.

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