

Link found between *Trichomonas* sexual infection and risk of aggressive prostate cancer

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A new study from Harvard School of Public Health (HSPH) and Brigham and Women's Hospital researchers has found a strong association between the common sexually transmitted infection, *Trichomonas vaginalis*, and risk of advanced and lethal prostate cancer in men.

The study appears online on September 9, 2009, on the *Journal of the National Cancer Institute* website and will appear in a later print edition.

"[Prostate cancer](#) is the most common cancer among men in western countries, and the second leading cause of cancer-specific mortality. Identifying modifiable risk factors for the lethal form of prostate cancer offers the greatest opportunity to reduce suffering from this disease," said Jennifer Stark, an HSPH researcher and lead author of the study.

One potential risk factor is inflammation, which appears to play an important role in the development and progression of prostate cancer, but the source of inflammation of the prostate is not clear. *Trichomonas vaginalis*, which infects an estimated 174 million people globally each year and is the most common non-viral sexually transmitted infection, can infect the prostate and could be a source of inflammation. With respect to prostate cancer prevention, it is noteworthy that up to three-quarters of men infected with *Trichomonas vaginalis* may not realize they are infected, since they may not have any symptoms.

A previous study had found an association between risk of prostate cancer and *Trichomonas vaginalis* infection, but was not large enough to determine if there was a link between the infection and advanced and lethal disease.

In the present study, the researchers analyzed blood samples from 673 men with prostate cancer who were participants in the Physicians' Health Study and compared infection status based on antibody levels to 673 control subjects who were not diagnosed with prostate cancer. The blood samples were collected in 1982, on average a decade before cancer diagnosis.

The results showed that *Trichomonas vaginalis* infection was associated with a more than two-fold increase in the risk of prostate cancer that was advanced stage at diagnosis, and a nearly three-fold increase in prostate cancer that would result in death.

"The fact that we found a strong association between serologic evidence of infection with *Trichomonas vaginalis*, a potentially modifiable risk factor, and risk of advanced and lethal disease represents a step forward in prostate cancer, especially given that so few risk factors for aggressive prostate cancer have been identified," said Lorelei Mucci, assistant professor in the department of epidemiology at HSPH and senior author of the study.

The authors note that further research needs to be done to confirm the findings. If confirmed, the findings from the large-scale, prospective study would identify infections as one of the few known modifiable factors for aggressive prostate cancer. Moreover, since the infection is easily treated with an inexpensive antibiotic regimen, the results from the study suggest that prevention or early treatment of *Trichomonas vaginalis* infection could be a target for prostate cancer prevention.

Provided by "Prospective Study of Trichomonas vaginalis Infection and Prostate Cancer Incidence and Mortality: Physicians' Health Study," Jennifer R. Stark , Gregory Judson, John F. Alderete, Vasanthakrishna Mundodi, Ashwini S. Kucknoor, Edward L. Giovannucci, Elizabeth A. Platz, Siobhan Sutcliffe, Katja Fall, Tobias Kurth, Jing Ma, Meir J. Stampfer, Lorelei A. Mucci, [Journal of the National Cancer Institute](#), online September 9, 2009

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