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Race plays a key role in prostate cancer survival rates

Japanese Americans respond better to hormone treatment than white Americans

Japanese American men with prostate cancer have a higher survival rate than white American males

Japanese American men respond better to hormonal treatment for prostate cancer and have a much higher survival rate than white American men, according to research published in the latest issue of the urology journal BJU International.

A team of researchers from the US and Japan compared 59 white males and 105 Japanese American males who had receive hormone treatment for prostate cancer at The Queen's Medical Centre in Honolulu, Hawaii.

They discovered that, although there was little difference between the patients' backgrounds and ages, five years after the treatment started the overall survival rate for the Japanese American patients was 66 percent, compared with 42 percent for the white men in the sample.

The result between the two ethnic groups did not appear to be affected by whether the men's cancer was confined to the prostate or had spread to other parts of the body.

However the survival rates tended to even out in the most advanced cancers, when the levels of the Prostate-Specific Antigen (PSA) protein produced by the prostate exceeded 100. About a quarter of the study sample had PSA readings in this range.

"Japanese men have one of the lowest rates of prostate cancer worldwide, but levels tend to be higher among Japanese American men, compared with those who actually live in Japan," says lead author Dr. Takashi Fukagai, a urologist at the Showa University School of Medicine in Tokyo.

"One theory is that Japanese Americans retain some native Japanese genetic and, or, lifestyle characteristics that lead to them developing prostate cancer less frequently than white American men.

"We also have a ongoing study of other ethnic groups, which has shown that Chinese men living in Hawaii have a similar prognosis to Japanese American men. We have also discovered that Filipino men have a worse prognosis than those two ethnic groups, but still enjoy a higher survival rate than white men.

The men who took part in the study had an average age of 76 and had all received hormonal treatment from the same team of urologists. Hormone therapy blocks the action of the male sex hormones that help the cancer cells grow, either through administering testosterone lowering drugs or by removing the testosterone-producing testicles.

None of the study subjects had received definitive surgical or radiation therapy.

Five factors were examined in detail - age, race, pre-treatment PSA score, the clinical stage that the cancer had reached and the Gleason score, which defines the severity of the cancer based on microscopic analysis.

Only two factors - race and the pre-treatment PSA score - were shown to have a significant effect on whether the patient survived and for how long.

"One of the reasons why the survival rate may be better among Japanese American men with a PSA of less than 100 is that they are less likely to suffer from the side-effects of the hormone treatment, such as heart problems, compared with white American males," adds Dr. Fukagai.

"There is also evidence that different races have different genetic profiles. As prostate cancer is a disease that is affected by hormones, it may be that the nature of the actual disease, and how it progresses, varies between different races.

"However prostate cancer undergoes various changes as it develops and we suspect that the changes that take place in the advanced stages of the disease reduce the effect of those ethnic differences.

"This would account for the fact that there was a difference in survival rates between Japanese American and white men with a PSA of less than 100, but those ethnic differences disappeared in more severe cases with a PSA of more than 100."

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Notes to editors

Comparison of the clinical outcome after hormonal therapy for prostate cancer between Japanese and Caucasian men. Fukagai, Namiki, Carlile, Yoshida and Namiki. Showa University School of Medicine, Japan; University of Hawaii School of Medicine, USA, and Kanazawa University Graduate School of Medical Sciences, Japan. BJU International. Volume 97, pages 1190 to 1193 (June 2006)

Established in 1929, BJU International is published 12 times a year by Blackwell Publishing and edited by Professor John Fitzpatrick from University College Dublin, Ireland. It provides its international readership with invaluable practical information on all aspects of urology, including original and investigative articles and illustrated surgery. www.bjui.org