Predicting the return of prostate cancer: New study betters the odds of success

July 2 2009

Cancer experts at Johns Hopkins say a study tracking 774 prostate cancer patients for a median of eight years has shown that a three-way combination of measurements has the best chance yet of predicting disease metastasis.

The new prediction method comprises the length of time it takes for PSA (prostate-specific antigen) to double, Gleason score (a numeric indicator of prostate cancer aggressiveness as seen under the microscope), and the interval between surgical removal of the prostate and the first detectable PSA level. According to Johns Hopkins investigators, combining these three measurements more accurately estimates risk that the cancer has spread than do other methods and should help determine which patients may benefit from additional therapy when PSA levels rise after surgery to remove the prostate.

Findings from the study presented at the June 2009 annual meeting of the American Society of Clinical Oncology (ASCO) may also help resolve the debate on when and in what form secondary treatments should occur.

"There is much debate on whether to prescribe immediate treatment for a man whose PSA begins to rise after he has had prostate cancer surgery, or to delay it," says Emmanuel Antonarakis, M.D., Johns Hopkins Kimmel Cancer Center investigator. "Studies suggest that most men live the same length of time overall whether they receive therapy at the first sign of a rising PSA or wait until the cancer has spread to other sites."

After reviewing the records of 774 men whose PSA rose after surgery to remove the prostate, the researchers found that Gleason score and two measurements for PSA were the strongest risk factors for prostate cancer metastasis. Men with Gleason scores in the highest range, between eight and 10, were twice as likely to develop metastatic cancer. In men whose PSA became detectable within three years after surgery, cancer was more than three times more likely to spread to other organs. Finally, men whose PSA doubled the fastest, within three months, were more than 20 times more likely to develop metastatic cancer than men whose PSA look longer than 15 months to double.

For men enrolled in the study, it took a median of 10 years for the disease to reappear on imaging scans. "The 10-year average will not apply to every man, so we wanted to know what factors put men at higher risk for their cancer progressing earlier," says Mario Eisenberger, M.D., professor of oncology at the Johns Hopkins Kimmel Cancer Center.

An increase in PSA, or prostate specific antigen, occurs in approximately 20 percent to 30 percent of men after surgery to remove the cancerous prostate, says Antonarakis. In these patients, the newly emerging prostate cancer cells are rarely detectable on imaging scans. When faced with the likelihood that their cancer has spread, many men opt to undergo hormone therapy, which blocks testosterone production, a fuel for prostate cancer. The side effects, which mimic those of menopausal women, include hot flashes, night sweats, osteoporosis, metabolic syndrome and coronary disease, and can be debilitating, says Antonarakis.

Besides immediate hormone therapy, other options for men whose PSA is rising are to use hormone therapy intermittently, enroll in clinical trials testing experimental therapies or combinations of them, or to "watch and wait" until imaging scans can locate metastatic disease.

Source: Johns Hopkins Medical Institutions

Citation: Predicting the return of prostate cancer: New study betters the odds of success (2009, July 2) retrieved 16 April 2024 from https://medicalxpress.com/news/2009-07-prostate-cancer-betters-odds-success.html