To a man, a serious threat

Prostate tumors are the most common danger for guys, and doctors are trying new tactics to diagnose and treat them

The specialist: Dr. Richard Stock on prostate cancer

As the chair of the department of radiation oncology, Richard Stock is an oncologist who specializes in using radiation to fight cancer.

Who's at risk

Prostate cancer is extremely common in the United States and Canada. About 105,000 men are diagnosed each year. "It's the most commonly diagnosed cancer in men, and the second leading cause of cancer death in men," says Stock.

The prostate is a gland that sits under the bladder in men. "It has a huge role in procreation — it creates the ejaculate that transports sperm," says Stock. A gland about the size of a walnut, the prostate becomes cancerous when multiple, usually small, tumors form within it. If untreated, these uncontrolled cancerous cells can spread to other parts of the body.

All men are considered at risk of prostate cancer, with risks increasing dramatically with age. "Men over age 50 tend to be most affected," says Stock. Most doctors agree that men should start being screened for prostate cancer at 50, though screening guidelines are very controversial. Unlike lung cancer or heart disease, prostate cancer is a disease that hasn't been linked to lifestyle choices.

"There's a lot we don't know about the cause of prostate cancer," says Stock. "The environmental and dietary risk factors haven't been proven." Some researchers hypothesize that diets high in fat and red meat put men at risk, but there's no data making a definitive link.

One thing doctors do know is that patients with a family history of prostate cancer are at higher risk. "We screen those patients at an earlier age," says Stock.

Signs and symptoms

For most men, prostate cancer gives no worrying signs until it spreads to other parts of the body. Most prostate-related symptoms involve the gland's natural tendency to enlarge as men age. "Over time, this enlargement can cause urinary issues like a weaker stream of urine or getting up at night," says Stock. "Most of the time, prostate enlargement is benign and has nothing to do with cancer."

Because it is often incurable by the time it becomes symptomatic, doctors rely on universal screening to catch it early. "It's controversial, most doctors agree that screening with PSA (prostate-specific antigen) blood test and DRE (digital rectal exam) tests should be given at the age of 50," says Stock.

"The reason screening is controversial is that for most patients, prostate cancer is a slow-growing cancer. For instance, some doctors say you shouldn't be screened after age 75 because prostate cancer grows so slowly, you're more likely to die of something else first."

Stock is in agreement with most oncologists in recommending that men be screened for prostate cancer each year starting at age 50. "Those with a family history should start at 45. The PSA test is a simple blood test, and results are usually back in two days. Typically, the normal range for PSA scores is 0-4," says Stock. "Now people are focusing on anything above 2.5 as a potential problem."

Some doctors argue that African-Americans have biopsies for scores above 2.5 because they are more likely to get prostate cancer and die of it. The other factor to think about with PSA results is whether your score is steady or increasing.

"These are serial numbers — it's not just an absolute number, it's a trend," says Stock. "If your PSA is increasing, you and your doctor should pay attention."

Traditional treatment

Doctors have three major ways to actively treat prostate cancer before it has spread: surgery, external beam radiation and radioactive seed implant therapy. The fourth treatment option is a passive one, the watch-and-see approach.

"Some patients may never need to be treated if they don't have an aggressive cancer," says Stock. "Unfortunately, we can't tell who will have an aggressive cancer and who won't."

Most doctors advocate watchful waiting for older patients and patients whose health is severely compromised by other diseases.

The major surgery for prostate cancer is radical pros tatectomy, which removes the prostate. "Basically, this surgery involves cutting the prostate away from the bladder and urethra, removing the prostate and reconnecting the bladder and urethra," says Stock. "It can be done with the aid of a laparoscope or robot, or through open surgery."

The recovery period often takes a few weeks or a month. Radiation uses X-rays to kill cancerous cells by damaging their DNA. "External beam radiation (EBRT) uses a linear accelerator to generate photons, which are a form of radiation," says Stock. "This therapy tends to be easier because there's no incision, though there's often fatigue." Radiation therapy is also very time-intensive — it usually involves daily treatments of about 15 minutes, given five days a week for eight to nine weeks.

Seed implants give doctors another way to deliver radiation. "Seed implant therapy involves using needles to insert small radioactive seeds into the prostate," says Stock. "This way the whole gland receives a very high dose of radiation. Implantation takes about 90 minutes, and patients are often back to normal activities the next day."

Doctors have not reached a consensus on which treatment works best for which patients. "Success tends to depend on which type of cancer it is and how far it has progressed," says Stock.

Research breakthroughs

The past 40 years have seen a revolution in prostate cancer treatment. Not only are 90% of cancers caught before they metastasize, but doctors have vastly improved technology for fighting cancer in the other 10% of patients. For instance, oncologists have found that treating aggressive cancers with radiation is even more effective when using a combination of external radiation, seed implant therapy and hormonal therapy.

"We know there's a close relation between testosterone and prostate cancer," says Stock. "So we add a medication that temporarily stops testosterone production to external radiation, or radiation seed implant therapy. There is a synergistic effect seen between the hormonal therapy and radiation in killing cancer cells."

Later, testosterone levels come back up.

"Using therapies in combination seems better than the standard therapies," says Stock. "This approach has yielded outstanding results."

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