

# FIGHTING PROSTATE CANCER IN HAMPTON ROADS

Prostate cancer has a huge impact on our community. In Virginia, deaths from prostate cancer exceed the national average and men in Hampton Roads are far more likely to lose their lives to the disease than elsewhere in the Commonwealth. Fighting prostate cancer means fighting a disease that takes the lives of our friends and family, regardless of race or economics. Even when caught, prostate cancer can severely diminish quality of life.

- Prostate cancer is the second-deadliest form of cancer in Virginia.
- For every 100,000 men in our state, 134 will be diagnosed with prostate cancer annually.
- Norfolk, Portsmouth, Chesapeake, Hampton, the Eastern Shore and Western Tidewater are among the top 15 highest-ranking areas in Virginia for prostate cancer diagnoses.

That's why the EVMS Leroy T. Canoles Jr. Cancer Research Center has created a two-pronged approach to combating prostate cancer. Not only do we develop new diagnostic tools that lead to patient-specific care, we also focus on disease-prevention techniques to identify the cascade of events that can result in prostate cancer. We've built a world-class team of innovative physicians and researchers, and, through extensive collaboration, we believe our prostate cancer research will lead to earlier detection, better care and improved life expectancy. Simply put, our goal is to fundamentally change the way prostate cancer is detected and treated.

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**AS MANY AS 7,000 VIRGINIA MEN LEARNED THEY HAD PROSTATE CANCER IN 2012,  
AND NEARLY 1,000 DIED AS A RESULT OF IT. THE DISEASE'S EFFECT ON THE  
HAMPTON ROADS AREA IS PARTICULARLY PROFOUND.**

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## RESEARCH ACCOMPLISHMENTS THAT EXPAND KNOWLEDGE AND BUILD HOPE

Prostate cancer can be fast-acting and lethal, but it can also sit silently for years without metastasizing or greatly affecting patient health. How can doctors and researchers determine the difference, which can have a huge impact on prognosis and treatment options?

At EVMS, the answer is proteomics. We were among the first to embrace this innovative new field, where unique protein signatures — called biomarkers — are used to identify the presence of prostate cancer and to help differentiate aggressive forms of the disease from less-invasive types. This allows us to recommend personalized treatment plans, separating patients who could benefit from watchful waiting from those who require assertive action through chemotherapy, radiation or surgery. Our team was the first to develop a National Cancer Institute-approved protocol for evaluating new proteomic biomarkers.

### Current projects include:

- Establishing new techniques to improve early detection of prostate cancer, even before the first symptoms arise
- Accelerating the discovery of new and better biomarkers — including a new approach that will accurately measure 50 proteins at once — leading to more personalized treatment plans
- Achieving a greater understanding of disease progression, including how prostate cancer metastasizes at the molecular level

**Successes include:**

- Finding new molecules that play key roles in triggering prostate cancer development
- Discovering substances in foods — such as soybeans — that make certain kinds of tumors more susceptible to chemotherapy, potentially making treatment more effective
- Building Virginia's largest collection of human prostate cancer tissue samples, supporting extensive research across a greater population
- Contributing to the early-stage development of the PSA test, today's standard for detecting prostate cancer

## **A RENOWNED TEAM WITH AN INTERDISCIPLINARY APPROACH.**

Thanks to our pioneering efforts in proteomics, EVMS scientists are leaders in prostate cancer research, with innovative new ideas and unique technological approaches. Together, they strive to expand our understanding of how prostate cancer works — from the underlying mechanisms that trigger it, to what makes it spread.

With advanced training from leading institutions such as Yale, Johns Hopkins, National Institutes of Health, the Mayo Clinic and Pennsylvania State University, our distinguished team includes surgeons, lab researchers, radiologists and pathologists. We also build key community partnerships outside of EVMS, collaborating with educators, hospitals and physicians who treat patients. As a result, our up-to-date clinical data and our sample materials directly reflect the patients in our community.

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**EVMS IS HERE TO SERVE AND ENRICH OUR COMMUNITY, AND WE'RE ALSO HERE TO ENHANCE THE NATION'S KNOWLEDGE. OUR CANCER RESEARCH LEADS AND GUIDES CUTTING-EDGE CLINICAL TREATMENT — AND IT DIRECTLY BENEFITS THE PATIENT.**

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O. John Semmes, PhD  
Anthem Distinguished Professor of Cancer Research  
Director, Leroy T. Canoles Jr. Cancer Research Center

## **YOU CAN JOIN OUR TEAM IN THE FIGHT FOR HOPE.**

By supporting EVMS cancer research, you can be the difference between an exciting concept and a life-changing new treatment. You can help us alleviate the disease's impact on our community. And by contributing to our success, you and your family may one day benefit — through early intervention and improved treatment for your father or brother, friend or son.

To learn how you can make a real difference in the fight against prostate cancer, visit [evms.edu/canoles](http://evms.edu/canoles) or call the EVMS Office of Development at 757.446.6070.