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Prostate Cancer Diagnosis and Management

Clinical Trial to Test If MRI Can Replace Current Standard of Care

A team of scientists in Canada has secured funding for a three-year Phase III clinical trial focused on improving the way we biopsy for prostate cancer and whether magnetic resonance imaging (MRI) can replace the current standard of care to diagnose prostate cancer.

The PrECISE project to construct computational models to improve prostate cancer treatment, has secured \$3 million in funding from the Movember Foundation, the Ontario Institute for Cancer Research (OICR) and Prostate Cancer Canada to determine whether MRI imaging can spare some men from undergoing a biopsy and avoid the possible associated side effects.

Leading the project is Dr. Laurence Klotz of the Sunnybrook Research Institute in Toronto, the man who is credited with coining the term 'active surveillance', a standard practice to monitor patients with low risk prostate cancer. Dr. Klotz, a world leader in the field of prostate cancer research, is also a professor at the University of Toronto and the Chair of the World Urologic Oncology Federation.

MRI technology is a precise tool that could better identify which patients should undergo biopsy, and enable targeted biopsy of only areas suspected of malignancy.

TRUS-Guided Biopsy Not Sensitive Enough

Currently, prostate cancer is diagnosed by trans-rectal ultrasound (TRUS)-guided biopsy of the prostate, in most cases following a Prostate Specific Antigen (PSA) test.

This form of biopsy carries potential side effects such as infection and bleeding because it is not targeted, and requires as many as 10 or 12 biopsy samples to establish an accurate reading. In addition, this current standard of care is not sensitive enough to discriminate between high-risk and very low-risk changes in prostate tissue, resulting in the overdiagnosis and over-treatment of many men.

Klotz believes that this trial would support a change in practice from relying on biopsies for all men with suspected prostate cancer to providing MRI first with selective targeted biopsy. He said that this approach would allow 250,000 men a year in the U.S. and Canada to avoid unnecessary biopsies and the associated complications including hospitalisation.

OICR's strategic priority is to improve the management of patients with early prostate cancer and to avoid over-diagnosis while ensuring men with prostate cancer get the treatment they need. Dr. Lincoln Stein, Interim Scientific Director of the Ontario-based research institute said that using MRI to image the prostate before biopsy will help reduce the number of unnecessary biopsies and their associated complications, while ensuring maximum precision for guiding the biopsy when and where it is really needed.

Data management and analysis for the trial will be conducted by the Ontario Clinical Oncology Group (OCOG) in the Escarpment Cancer Research Institute, a Hamilton Health Sciences and McMaster University institute.

"Approximately 20 years after PCC helped fund Dr. Klotz' watchful observation study, hundreds and hundreds of men with low-risk prostate cancer have had an option to avoid unnecessary treatment," said Dr. Stuart Edmonds, PCC's vicepresident of Research and Health Promotion.

Further Information

The **Movember Foundation** is a global charity raising funds and awareness for men's health. Since 2003, \$670 million has been raised to fund over 800 programmes through impact investments, focusing on prostate cancer, testicular cancer, poor mental health and physical inactivity. The annual Movember campaign in November is globally recognised for its fun and innovative approach to raise money and get men to take action for their health. Movember.com

Prostate Cancer Canada is the leading national foundation dedicated to the prevention of the most common cancer in men through research, advocacy, education, support and awareness. prostatecancer.ca

Ontario Institute for Cancer Research (OICR) is an innovative cancer research and development institute in Ontario, Canada, dedicated to prevention, early detection, diagnosis and treatment of cancer. OICR has key research efforts underway in small molecules, biologics, stem cells, imaging, genomics, informatics and bio-computing. oicr.on.ca

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