A diagnosis of prostate cancer does not always necessitate immediate treatment. Each patient and their provider must weigh the treatment options against the diagnosis, and the aggressiveness of the disease. Treating men for slow-growing, non-aggressive prostate cancers can potentially do more harm than good leaving patients with unnecessary side effects to manage. Thus, in recent years, there has been an increasing need to better understand prostate cancer risk and to find ways to more accurately distinguish aggressive from non-aggressive prostate cancers.

Dr. Michael Leapman, Assistant Professor of Urology, is researching how new technologies affect decision making of doctors and their patients who are facing prostate cancer. “Prostate MRIs and forms of genomic testing have been developed in recent years and appear to show promise, but less is known about how they impact decision making,” Dr. Leapman said. “There are many new tools on the horizon and how they affect decision making is still being explored.”

To facilitate his research, Dr. Leapman recently received a pilot grant from Yale Cancer Center to investigate the impact of new risk assessment technologies for prostate cancer. “I was very fortunate to receive support from Yale Cancer Center towards our efforts,” he said. “Our imperative is to understand and improve how cancer care is delivered for all.”

Dr. Cary Gross, Professor of Medicine and co-founder of COPPER who is collaborating with Dr. Leapman on this work, notes one of the important aspects of this study is the examination of new data on a large scale. “Dr. Leapman’s study stands out because he is using very up-to-date data on thousands of patients across the country to investigate whether new tests are having an impact on men with prostate cancer,” Dr. Gross said.

The swift development of new methods of detection, assessment, and treatment poses a challenge for doctors and their patients. “Although new cancer treatments are studied rigorously, that is not always the case with new tests. Hence, although genetic tests and MRIs are both being adopted into prostate cancer care, we still don’t know how they are used and how patients are affected. It’s difficult for doctors and patients to know which ones work and which ones don’t before they are being used in clinical practice,” Dr. Gross explained.

The two tools under study are MRI of the prostate and genomic testing of biopsies. The MRI can provide an idea of the grade of the prostate cancer and its stage. It will also indicate if it has progressed beyond the prostate. This is helpful information in determining whether or not a patient should receive treatment or choose to hold off on treatment and monitor it. For genomic testing, genetic tests are performed on the cancerous tissue. The results can help predict the risk of the cancer, determining how aggressive it is and the possibility that it could metastasize.

“Previously, for men with prostate cancer, the decision to treat or not treat was based on factors such as the grade of the cancer on the biopsy, the PSA level, and the results of a digital rectal examination (DRE),” Dr. Leapman said. “Recently there has been an expansion of highly promising tools that appear to enhance how these decisions are made, but less is known about their adoption or impact.”

Dr. Leapman will look at data at the national level, using administrative claims for his research. This will allow him to gain a much larger picture of the state of contemporary care patterns in the country. “Most of the literature surrounding these tools comes from relatively small, controlled studies performed at academic medical centers,” Dr. Leapman explained. “We know that care delivered at centers where these technologies are developed might be different than in real-world settings.”

To understand the broader data, Dr. Leapman will use information from a variety of sources, including the SEER Medicare database and other private administrative plans.

Beyond examining the different kinds of institutional data available, Dr. Leapman stressed the importance of seeing the whole picture. He noted that in a previously published study looking at the patterns of MRI use in men with prostate cancer, they detected many variations including racial, socio-economic, and geographic disparities. By reviewing all of the data, a clearer understanding of the trends in prostate cancer care will emerge. As Dr. Leapman puts it: “our imperative is to understand and improve how cancer care is delivered for all.”

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