Prostate Cancer Patients with Advance Disease Should Consider PARP Inhibitor Therapy, A Novel Precision Medicine Treatment

In the current era of precision medicine, the development of targeted drugs has led to significant development in cancer therapeutics. One class of targeted therapy is one that interferes with the cancer cell’s ability to repair damaged DNA. This is done by blocking poly-ADP ribose polymerase (PARP), a cancer cell protein responsible for repairing DNA damage. As the cancer cell divides, the concentration of damaged DNA increases, and cancer cell death is initiated.

The use of PARP inhibitors (PARPi) to treat cancers is not new. The FDA has approved the use of PARPi for the treatment of certain forms of ovarian and breast cancers, that carry specific genetic biomarkers such as BRCA mutations.

Similar genetic biomarkers have been discovered associated with prostate cancer. These discoveries had led to clinical trials investigating the effects of PARPi on men with advanced prostate cancer. Success with these trials has led to the FDA’s approval of two PARPi for advance prostate cancer patients with certain genetic mutations.

There are increasing numbers of new clinical trials investigating the impact of PARPi alone or in combination with other prostate cancer therapies. To learn more about clinical trials, which incorporates PARPi for the treatment of men with advance prostate cancer please review the trials below.

- **Amplitude**: This clinical trial is for men with metastatic castration-sensitive prostate cancer (mCSPC) and deleterious germline or somatic homologous recombination repair (HRR) gene alteration.

- **Talapro3**: This clinical trial is for men with metastatic castration-sensitive prostate cancer (mCSPC) and DNA damage repair (DDR) gene alteration.

For more information about genetic biomarkers, view our previous webcast Genetic Testing Helps Determine Your Risk for Prostate Cancer.