MCC Team Science Padres Pedal the Cause Winter 2021

Hormone-Sensitive Cancer Risk, Detection, and Outcomes in Transgender and Gender Nonconforming Adults

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Scientific Abstract:

Because of widespread stigma associated with gender nonconformity, many transgender and gender non-binary (TGNB) individuals live on the margins of society and face discrimination, exclusion, and violence. Treatment is available to assist people to explore their gender identity and find a gender role that is comfortable for them[1]. Hormonal therapy is arguably the most important medical therapy for the transition process. However, it remains unknown whether hormone therapy impacts the incidence of hormone-sensitive malignancies, specifically prostate cancer in transgender women (assigned male at birth) and breast cancer in both transgender men (on masculinizing hormones) and transgender women (on feminizing hormones). For the first time, we seek to use a mixed methods approach to understanding risk of disease, detection patterns, disparities in care, and outcomes in TGNB adults. First, we will analyze the risks and outcomes of prostate cancer using a large national database (VINCI data from the VA healthcare system) to assess prostate cancer incidence, PSA screening, and biopsy patterns in transgender women and cis-gender men. Next, we will use the same VA dataset to identify patterns of screening mammography and predictors of outcome in TGNB adults. We will also identify specific mammography characteristics of breast tissue in TGNB patients on hormonal therapy seeking care in the UC healthcare system, and we will conduct a RAND Appropriateness (modified delphi) panel to develop quality-of- care indicators for breast cancer screening in TGNB patients. Lastly, we seek to determine the range of PSA levels and ExoDx profiles in transgender women.

Lay Abstract:

Because of widespread stigma associated with gender nonconformity, many transgender and gender nonbinary (TGNB) individuals live on the margins of society and face discrimination, exclusion, and violence. Theyoften have difficulty accessing appropriate health care, including both care specific to their gender needs andgeneral medical care. They also experience mistreatment in the healthcare system, leading them to avoid it entirely. As a result, they experience poor health compared to “cisgender” (non-transgender) people. Hormone therapy is a critical part of the transition process to help patients live in their true gender. However, it remains unknown whether hormone therapy in transgender individuals impacts the incidence of hormone-sensitive malignancies, specifically prostate cancer in transgender women (assigned male at birth but living as women)and breast cancer in both transgender men (on masculinizing hormones) and transgender women (on feminizing hormones). For the first time, we seek to understand risk of disease, detection patterns, disparities in care (worse care provided to TGNB individuals), and outcomes in transgender and gender nonconforming adults. We will approach these knowledge gaps through three projects that focus on 1) patterns of care for prostate cancer, 2) developing measures of care for breast cancer screening, and 3) biomarkers for prostate cancer screening. We will

do this through a “mixed methods” approach, that includes analysis of a national dataset, focus groups with patients, mammogram analysis and development of quality measures, and blood tests.