Gender Disparity: Overlooking Hereditary Prostate Cancer

Abstract#85
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BACKGROUND
• Men and women are equally likely to carry mutations in hereditary cancer genes and both have elevated cancer risks. Despite this, over 95% of patients undergoing hereditary cancer multi-gene panel testing (MGPT) at our laboratory are women.
• Prostate cancer (PC) has been associated with germline mutations in several genes, most often BRCA2.
• Recently, 11.8% of men with metastatic prostate cancer were found to have germline mutations in BRCA and other DNA-repair genes.
• We sought to describe the mutation spectrum and MGPT uptake in men with prostate cancer compared to women with breast cancer (BC).

MUTATION-POSITIVE RATES: MALES vs. FEMALES
• 14.2% (93/654) of PC probands tested positive for one or more mutations, compared to 8.6% of women with BC.
• Average age at PC diagnosis was 60 yr for mutation-positive men and 59 yr for mutation-negative men.

MULTI-GENE PANEL RESULTS FOR PC PROBANDS
• 100 germline mutations were found in 93 Men with PC, across 18 different genes.
• BRCA mutations made up 40.9% of PC positives (38/93); BRCA2 mutations accounted for over 31%, followed by ATM (20.4%, CHEK2 (13.8%), and Lynch syndrome-associated genes (9.7%).
• Of the 100 total mutations, 94% were in genes that would impact management recommendations for PC probands and/or their relatives.

METHODS
• Test results were reviewed for all patients and female BC patients undergoing MGPT (June 2013 – June 2016) for up to 49 genes. Clinical history was obtained from ordering providers.

REFERENCES