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MP61-19

INCIDENCE OF ERECTILE DYSFUNCTION AND TESTOSTERONE DEFICIENCY IN TESTICULAR CANCER SURVIVORS

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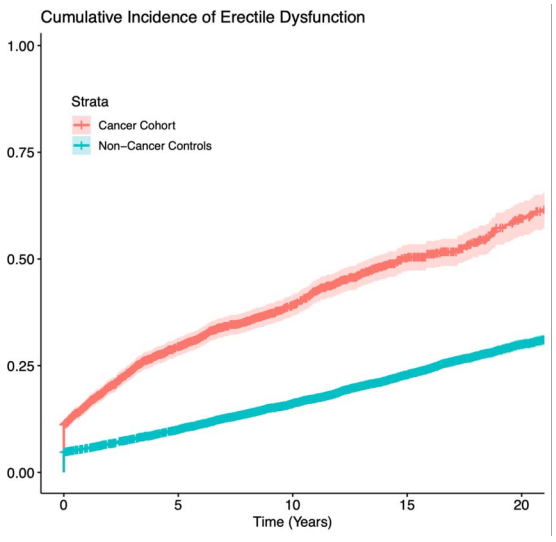
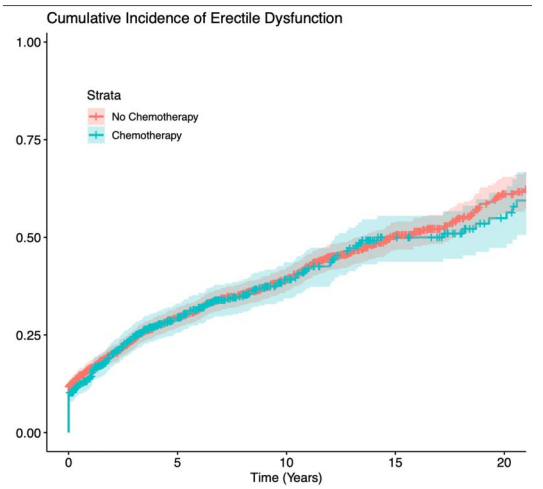
INTRODUCTION AND OBJECTIVE: Testicular cancer (TC) survivors have excellent oncologic outcomes, but may suffer from long-term adverse treatment related health outcomes for the remainder of their lives. This project aims to characterise the incidence of men's health disorders, specifically focusing on erectile dysfunction (ED) and testosterone deficiency (TD) in TC survivors.

METHODS: We conducted a retrospective cohort study of US veterans diagnosed with TC from 1990-2021. These were compared to an age-matched control group of US veterans without diagnosis of TC. ED and TD were defined either by the presence of diagnosis codes or at least a 6-months prescription for medications treating these conditions. Time was measured from date of TC diagnosis (for TC patients, and matched TC patient date for the corresponding non-cancer controls). Association between outcomes and a diagnosis of TC or receipt of chemotherapy was evaluated using multivariable Cox regression models.

RESULTS: 2022 TC patients were compared to 7595 non-cancer controls. TC patients were significantly more likely to experience ED (Hazard Ratio (HR) 2.97, 95% confidence interval (CI) 2.71-3.25, $p<0.001$) and TD (HR 5.59, 95% CI 4.88-6.40, $p<0.001$).However, within the TC group, there was no significant difference in the incidence of ED and TD when stratified by receipt of chemotherapy ($p=0.743$ and $p=0.561$, respectively).

CONCLUSIONS: ED and TD arise more commonly and earlier in the lives of TC survivors. It is important for treating physicians to screen for these diseases to provide timely and appropriate care.





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MP61-20

UTILITY OF CIRCULATING TUMOR DNA IN PATIENTS WITH DIFFERENT STAGES OF TESTICULAR CANCER

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INTRODUCTION AND OBJECTIVE: Circulating tumor DNA (ctDNA) has been gaining popularity in directing and tailoring treatment modalities in solid cancers. ctDNA utility before and after diagnosis of testicular cancer has not yet been well-characterized. We seek to characterize the utility of ctDNA in correlation with pathological and clinical features in patients with testicular cancer.

METHODS: Our single institution prospectively maintained database identified consecutive patients who underwent radical orchiectomy between 2020-2023, included were patients who had a ctDNA (Signatera™) performed before or after surgery. Baseline characteristics, pathological, and oncological outcomes were collected from electronic medical charts. Study findings were reported using descriptive statistics. A p-value of <0.05 was considered statistically significant. R programming language version 4.3 was used for all statistical analyses.

RESULTS: A total of 41 patients were included in the study. The median age was 33 (IQR 26-38). The median follow up time was 10 months (IQR 5-16). Overall, 21 patients had pre-orchiectomy ctDNA results, all except two (one with a Leydig cell tumor and one with seminoma) were positive (95%). All patients in clinical stage I ($n=28$) had negative postoperative ctDNA results. Five Patients replased and 3 had correlative ctDNA status. Another three underwent retroperitoneal lymph node dissection (RPLND) and had benign pathology. In IS stage ($n=4$) all patients received chemotherapy, three patients had ctDNA result, two converted to negative after receiving chemotherapy without evidence of relapse. For stage II ($n=6$), 5 patients had ctDNA result, two received chemotherapy and converted to negative status, another three underwent primary RPLND with viable tumor on pathology, and two converted to negative status after receiving further chemotherapy. The third patient converted to negative after RPLND and is under surveillance. One patient with stage III disease died during chemotherapy he had a positive status throughout the treatment. Of note, two patients who underwent RPLND and had viable tumor on pathology had positive ctDNA status with normal serum markers, and two patients who underwent PC-RPLND had negative ctDNA with teratoma on pathology.

CONCLUSIONS: ctDNA status was found to be correlated with the different stages of testicular cancer. ctDNA may be used for tailoring treatment protocols to patients with negative/mildly elevated serum tumor markers and for treatment escalation/deescalation. Prospective studies with larger cohorts are necessary to validate these initial results.

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