



Does residual testicular volume following partial orchiectomy for malignancy, impact the development of hypogonadism?

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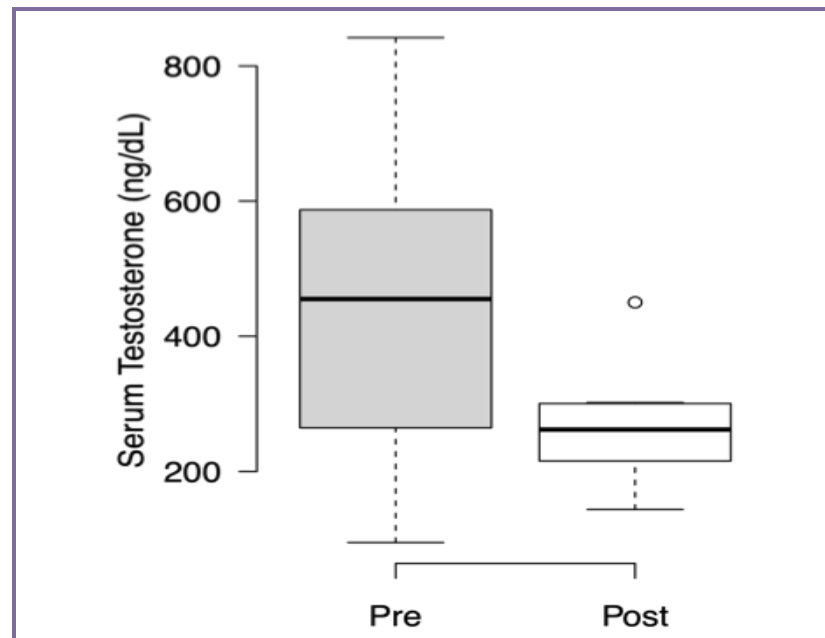


Introduction and Methods

- Partial orchiectomy is indicated for fertility and Leydig cell preservation in bilateral testicular masses, or a mass in a solitary testicle.
- Patients are at increased risk of hypogonadism as a result of testicular volume loss, warm ischemia, and adjuvant radiation.
- **Objective:** To assess if the residual total testicular volume, following partial orchiectomy is associated with hypogonadism and the need for testosterone replacement therapy (TRT).
- **Methods:** Retrospective chart review of institutional databases for partial orchiectomies at three academic centers from January 2005 - July 2019.

Results

- All patients who underwent partial orchiectomy (N=9) progressed to TRT (mean 11 months)
- Mean residual total testicular volume 9.8 mL (\pm 4.2mL)



Serum testosterone pre and post partial orchiectomy,
Mean=434 \pm 245 and 267 \pm 92 ng/dL



Conclusions

- This is the first study to assess the association of residual testicular volume and the development of hypogonadism following partial orchiectomy.
- **Residual total testicular volume was not protective against developing hypogonadism as all patients who underwent organ sparing surgery ultimately required TRT.**
- Additional studies are needed to determine whether there is a subset of patients for whom partial orchiectomy can preserve gonadal function.