Patients carrying a germline mutation were younger than patients with no mutations (40.7 yo (20 - 67) vs. 49.6 yo (11 - 80)) and had a higher prevalence of metastatic tumors (26.6% vs. 20.4%). The prevalence of germline mutations was 43.3% (26/60) in PGLs and 14.7% (11/75) in PHEOs. In the 26 mutated PGLs, there were 13 *SDHC* (50.0%), 6 *SDHB* (23.1%), 4 *SDHD* (15.4%), 2 *SDHA* (7.7%) and 1 *FH* (3.8%) mutations. The recurrent pathogenic *SDHC* c.397C>T (p.Arg133*) mutation was found in 12 out of the 13 *SDHC* mutations reflecting the presence of a funder effect in the French Canadian population. In the 11 mutated PHEOs, there were 3 *MAX* (27.3%), 3 *VHL* (27.3%), 2 *RET* (18.2%), 1 *SDHB* (9.1%), 1 *NF1* (9.1%), 1 *FH* (9.1%) mutations.

From 2015- 2019, we proposed NGS assay with the multigene panel to 12 patients (9 PHEOS and 3 PGLs) for whom the initial genetic test was negative. Novel germline mutations were found in 4 (33.3%) of these patients, representing 10.8% (4/37) of the mutation-carriers. Mutations were found in 2/9 PHEOs; a 28 yo female with bilateral PHEOs (*MAX* (deletion exon 1 and 2)) and a 33 yo male with malignant PHEO *(MAX* (c.3G>A)), and in 2/3 PGLs; a 31 yo woman with metastatic abdominal PGL *(SDHA* (c.985C>T) and a 59 yo woman with a thoracic PGL (*SDHA* (c.1432_1432 + 1del).

Variants of uncertain significance (VUS) were identified in 7/60 PGLs (11.6%) and 5/75 PHEOs (6.7%) but the significance of these variants remains to be determined.

Conclusion: In our cohort, the prevalence of germline mutations was of 44.3% in apparently sporadic PGLs and 14.7% in PHEOs. Genetic re-evaluation overtime using multigene sequencing by NGS assay in a subgroup of patients led to an increase of mutation rate in PHEOs and PGLs with the identification of germline *MAX* and *SDHA* mutations.

Reproductive Endocrinology

MALE REPRODUCTIVE HEALTH - FROM HORMONES TO GAMETES

Effect of Weight on Serum Testosterone with Subcutaneous Testosterone Enanthate in Men with Testosterone Deficiency

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SAT-037

Background: In men, obesity is often associated with low testosterone (T) levels, but information is limited as to how body weight affects the pharmacokinetic profile or dosing of testosterone therapy (TTh) in men with T deficiency. Historically, men with body mass index (BMI) >32.4 kg/m^2 required higher doses of T 2% gel to achieve physiological T levels than men with BMI ≤29.1 or 29.2–32.4 kg/m^2.(1) In a phase 3 trial (N=150) of subcutaneous (SC) testosterone enanthate (TE) administered weekly, concentration-guided dosing raised T levels to within physiological range in 92.7% of patients.(2) Here, we report a post hoc analysis evaluating the association between body weight and serum T levels attained with SC TE. **Methods**: SC TE was evaluated in an open-label, single-arm, dose-blinded, 52-week phase 3 trial (NCT02159469). Patients self-administered 75 mg SC TE weekly during the titration phase; blinded dose-adjustments in 25 mg increments occurred at pre-defined time points beyond the sixth dose. The primary endpoint of this study was the percentage of patients achieving an average serum T concentration ($C_{avg0\text{-}168h}$) of 300 to 1,100 ng/dL at week 12. For this post hoc analysis, a linear regression model with weight and dose as independent variables was used to assess differences in mean minimum T concentration (C_{min}) and $C_{avg0\text{-}168h}$ at week 12. **Results**: For this analysis, 137 patients were included. Doses were 50 mg (n=25), 75 mg (n=93), and 100 mg (n=19). The mean weight was 84.4 kg, 102.2 kg, and 112.0 kg for the 50 mg, 75 mg, and 100 mg dose groups, respectively (range, 49.9–146.5 kg). The dose-normalized T C_{min} was 9.2 ng/dL, 5.7 ng/dL, and 4.3 ng/dL per 1 mg of SC TE for the 50 mg, 75 mg, and 100 mg groups, respectively. The dose-normalized T $C_{avg0\text{-}168h}$ was 12.0 ng/dL, 7.2 ng/dL, and 5.7 ng/dL per 1 mg of SC TE. In an overall linear regression model, 48.2% (P<0.0001) and 55.0% (P<0.0001) of the total variance in C_{min} and $C_{avg0\text{-}168h}$, respectively, can be predicted from the independent weight and dose variables. **Conclusion:** Our results show an inverse relationship between body weight and T exposure. Men with higher mean body weights required higher doses of SC TE to achieve physiologic T levels compared with men with lower mean body weights. The available doses provide effective options to reach target exposures. These findings highlight the impact of weight and dose selection on SC TE exposure. **References:** (1) Dobs et al., *J Sex Med* 2014;11:857–864; (2) Kaminetsky et al., *J Urol.* 2019;201:587–94.

Tumor Biology

ENDOCRINE NEOPLASIA CASE REPORTS I

Adrenal Plasmacytoma in Multiple Myeloma Patient-An Unusual Presentation

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SUN-928

Title: Adrenal Plasmacytoma in Multiple Myeloma Patient: an unusual presentation

Introduction:

Extramedullary plasmacytomas are plasma cell tumors that arise outside of the bone marrow. They are solitary lesions, and are most often located in the head and neck region, mainly in the upper aerodigestive tract. However, involvement of adrenal gland is extremely rare, with only nine case reports published to date. A mass in the adrenal gland carries a broad differential, and identification is important, as diagnosis drives treatment options. CT imaging with attenuation, timing of contrast medium washout, size, and shape, with biopsy is necessary for diagnosis of a high Hounsfield unit mass. Ruling out pheochromocytoma before biopsy of the adrenal glands is crucial.

Clinical Case:

A 64-year-old female was diagnosed with multiple myeloma after presenting with back pain and altered mental status. Imaging revealed diffuse lytic lesions in clavicles, pelvis,