Conclusion: Adrenocortical carcinoma is a rare, aggressive tumor that often secretes excess cortisol and/or androgens. In the case presented a large advanced stage ACC was nonfunctional. First-line therapy for ACC includes resection with debulking surgery, radiation therapy, and/or chemotherapy. 5-year survival rates range 62-82% for those with disease confined to the adrenal gland and 13% for tumors associated with distant metastases. Repeat CT scans for our patient demonstrated stable appearance after four cycles of chemotherapy, thus indicating this treatment regimen may be beneficial for such an aggressive disease.

Cardiovascular Endocrinology
VASCULAR DISEASE AND PATHOPHYSIOLOGY

Early Atherosclerosis in Polycystic Ovary Syndrome: a Systematic Review, Meta-Analysis and Meta-Regression.

Marco Parolin, MD1, Marco Beghetto, MD1, Francesco Fallo, MD2, Angelo Di Vincenzo, MD2, Roberto Vittor, MD2, Roberto Mioni, MD1, Paola Aguiari, Ph.D1, Anna Milanese, MD, PhD3, Marco Rosato, MD, PhD, Claudio Rugano, MD, PhD1.

1University of Padova, Padova, Italy, 2University of Padova/Clinica Medica 3, Padova, Italy, 3University of Padova, Padua, Italy, 4Department of Medicine, Veterans Affairs Greater Los Angeles Healthcare System, David Geffen School, West Hollywood, CA, USA, 5University of California los angeles, Los Angeles, CA, USA.

SAT-LB98

Backgroung. Polycystic ovary syndrome (PCOS) is a common disorder affecting reproductive age women and is a cluster of endocrine and metabolic alterations ranging from impaired ovulation and androgen excess to abdominal obesity and metabolic syndrome leading to increased cardiovascular risk profile. Aim. To perform a meta-analysis on the effect of PCOS on surrogate markers of atherosclerosis, namely intima media thickness (IMT), flow-mediated dilation (FMD) and pulse wave velocity (PWV) and to run a meta-regression on the potential determinants of preclinical atherosclerosis. Methods. A search through Pubmed/ Medline and ISI-web of knowledge retrieved 90 studies that were used for meta-analysis. Selected outcomes were IMT (n=6199), FMD (n=3090), and PWV (n=2477) while age, BMI, waist circumference, total testosterone, free androgen index (FAI), total-, HDL- and LDL-cholesterol, HOMA-index, systolic and diastolic blood pressure were used for meta-regression analysis. Results. Random effect meta-analysis showed that IMT was significantly increased (ES 0.47, 95% C.I. 0.64 to 0.30, p<0.0001), FMD was significantly impaired (ES -0.92, 95% C.I. -0.69 to -1.15, p<0.0001) and PWV was significantly increased (ES 0.28, 95% C.I. 0.48 to 0.08, p=0.006) in PCOS compared to controls. Meta-regression analysis showed that FMD was positively correlated with FAI (p=0.018) while negative correlations were found between Effect Size (IMT) and BMI (p=0.02), waist circumference (p=0.05) and total cholesterol (p=0.02).

Conclusions. This meta-analysis shows a clear effect of PCOS on all markers of preclinical atherosclerosis (IMT, FMD and PWV). Heterogeneity of results is explained in part by the androgen status that was positively linked to impairment of FMD while increasing of anthropometric and metabolic variables (waist, BMI and total cholesterol) seem to overcome PCOS on preclinical atherosclerosis.

Steroid Hormones and Receptors
STEROID AND NUCLEAR RECEPTORS

A Comparison of Androgen Receptor Splice Variant, AR-V7, and Glucocorticoid Receptor Activity in Prostate Cancer

Amit K. Dash, Ph.D1, Basil Paul, Ph.D2, Matthew J. Robertson, Ph.D3, Harika Nagandla, Ph.D3, Kimal Isira Rajapakse, Ph.D2, Cristian Coarfa, Ph.D1, Nancy Lynn Weigel, MA,Ph.D1.

1Baylor College of Medicine, Houston, TX, USA, 2Baylor college of medicine, Houston, TX, USA.

SUN-LB136

Prostate Cancer (PCa) is an androgen dependent disease and patients with metastatic PCa are treated with androgen deprivation therapy (ADT). Although most tumors respond initially, tumors become resistant and are termed castration resistant prostate cancer (CRPC). There is compelling evidence that most of these tumors retain androgen receptor (AR) dependence and some data to suggest that, in some cases, the glucocorticoid receptor (GR) substitutes for AR. AR, itself, is re-activated through a variety of mechanisms including the expression of constitutively active AR splice variants that lack the ligand binding domain (LBD) of AR. Expression of one variant, AR-V7, which contains the amino-terminal domain and DNA binding domain of AR and 16 unique amino-acids, has been correlated with resistance to second line ADT. Although there has been some debate regarding the role of AR-V7, whether it is only a partial substitute for AR or has unique activities, our studies of engineered cell lines treated to express levels of AR-V7 equivalent to AR, clearly show that while the AR isoforms have common targets, they each also have unique targets. Consistent with this, the cistromes of the two show many unique sites as well as common sites. AR-V7 binding is enriched near the transcription start site (TSS) and we have identified a novel de novo binding motif. These findings suggest the possibility of developing a gene signature unique to AR-V7. Because GR activity in PCa has also been suggested as an escape mechanism in response to ADT, and GR binds to the same consensus response elements, we sought to identify a GR signature in PCa, to compare it with the AR and AR-V7 signatures, and to ask whether the AR-V7 and/or GR signatures are enriched in CRPC. Because much of the gene signatures are cell line dependent, we sought to compare GR and AR-V7 action in cells that express both. LN-95 cells express both AR-V7 and GR. MDA-PCa-2b cells, a cell line derived from an African American patient, expresses GR, but not AR-V7. The parental line was infected with a lentivirus that expresses AR-V7, and VCaP-AR-V7 lines, but there was good overlap of the MDA-PCa-2b AR-V7 regulated with the LNCaP AR-V7 and VCaP-AR-V7 lines, but there was good overlap of the MDA-PCa-2b AR-V7 regulated with the LNCaP AR-V7 regulated genes. Genes induced by GR overlapped with AR and isoform common genes, but did not overlap with

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AR-V7 specific genes. A comparison of AR-V7 specific genes common to the LNCaP and VCaP models as well as to publicly available data sets for LN-95 and 22RV1 AR-V7 signatures, show a strong correlation with CRPC compared to primary tumors when analyzed in the Grasso data set.

Diabetes Mellitus and Glucose Metabolism
DIABETES COMPLICATIONS I
Psychosocial Benefits of Using Basal-IQ® Predictive Low Glucose Suspends Technology in a Real-World Setting: Results From Pediatric Patients With Type 1 Diabetes
Harsimran Singh, PhD, Michelle Manning, MA, Molly McElwee-Malloy, RN, CDE, Steph Habif, MS, EdD.
TANDEM DIABETES CARE, INC., SAN DIEGO, CA, USA.

SAT-LB113
Recent literature has highlighted remarkable clinical benefits of the Basal-IQ Predictive Low Glucose Suspends (PLGS) technology for both pediatric and adult patients with type 1 diabetes (PwT1D). Although less frequently acknowledged in the literature, psychosocial benefits and other patient-reported outcomes (PROs) related to this technology, are critical to its sustained and satisfactory use. For purposes of this study, we analyzed pediatric PwT1Ds (n=123) who had recently started using the t:slim X2 insulin pump with Basal-IQ technology (Tandem Diabetes Care). These pediatric users were part of a larger recruited sample that also included adults with T1D (not described here). Amongst other clinical and demographic measures, pediatric PwT1Ds completed the Diabetes Impact and Device Satisfaction (DIDS) scale at baseline and then again at 6 months post-assessment (PA). The DIDS is a brief, reliable and validated measure to ascertain device-specific satisfaction as well as impact of diabetes management in PwT1D. Pre-Post differences on DIDS were analyzed using repeated measures analysis of variance. Mean age of the pediatric sample was 12.25 years, female=45%, mean HbA1c=7.62%. At baseline, 91% used CGM, 27% used multiple daily injections, and 73% used insulin pumps as their therapy method. Parents/caregivers completed the DIDS on behalf of their child in most cases (92%). At PA, pediatric PwT1Ds, demonstrated significant changes on both subscales of the DIDS. Significant improvements were observed for device-related satisfaction (DS) (p<.001) whereas significant reduction was noted for diabetes-related impact (DI) (p<.01) indicating reduced burden of diabetes on daily life. These findings were noted regardless of patients’ baseline insulin delivery methods (MDI or insulin pump). For DS, at PA, patients reported the most improvement on items relating to “satisfaction with insulin delivery device” (29% increase, p<.001) and “hassle to use” (58% decrease, p<.001). For DI, items indicating the most reduction of diabetes impact were “worry about going low” (36% decrease, p<.001) and “wake up at night to treat low BG” (27% decrease, p<.001). These findings highlighted robust real-world evidence for psychosocial benefits of Basal-IQ technology for pediatric patients and their parents/caregivers. Using psychosocial PROs while evaluating medical devices and technologies is critical as they improve our understanding of patients’ experiences with these systems and their impact on quality of life. These aspects may not always be reflected in patients’ clinical outcomes but are essential for determining long term use and acceptance of new treatments and management regimens.

Bone and Mineral Metabolism
BONE AND MINERAL CASE REPORTS I
Pseudohypoparathyroidism 1B Presenting in a Woman Aborting With Multiple Cerebral Calcifications
Dioni Garate, MD, Adriana Villarreal, MD, Erika Chiu, MD, Elizabeth Salsavilca, MD.
Hospital Alberto Sabogal Sologuren, Lima, Peru.

SAT-LB67
Background. Pseudohypoparathyroidism is a heterogeneous condition characterized by hypocalcaemia and hyperphosphataemia as a result of the resistance of the target organ to parathyroid hormone (PTH) 

It is classified into several different entities (1A, 1B, 1C AND 2) according to molecular and clinical causes. PHP1B has resistance to PTH, normal levels of Gs activity and has no clear signs of hereditary Albright osteodystrophy (AHO) or other hormonal resistance. 2 Clinical case. A 26-year-old woman was admitted to the emergency service due to an abortion and severe hypocalcemia. Background: generalized tonic-clonic seizures and hypocalcemia for nine years without treatment. The physical exam showed Chvostek and Trousseau, and round face. Its height is 148 cm, weight 60 kg, BMI of 27 kg/m2, without clinical features of AHO. Analytics reported Calcium 4.6 mg / dl (8.5-10.5), βHCG 1795 mIU / ml (<10), PTH 206 pg / ml (15-65), phosphorus 7.35 mg / dl (2.5-4.9) Creatinine 0.57 mg / dl, magnesium 2.02 mg / dl, 25-OH-D3 29ng/ml (30), TSH 4.2uUI / ml (0.27-4.20), Hb 10.6 mg/dl. A brain CT scan showed calcifications in the basal ganglia (thick annular), subcortical area (crescent) and cerebellar hemispheres. Renal and thyroid ultrasound without alterations. Radiographs of four limbs and skull found no radiological signs of AHO. Ophthalmologic evaluation revealed bilateral cataract. During hospitalization she underwent curretage, was treated with calcium gluconate, then calcium and calcitriol supplements. At follow-up, serum and urine calcium levels were monitored for optimal treatment. Conclusions. We report a patient with typical biochemical findings of PHP and in the absence of AHO it would be classified as 1B. The importance of early recognition and a mandatory multidisciplinary approach offer a better prognosis avoiding extensive brain calcifications, seizures and obstetric complications. The long-term treatment of hypocalcemia associated with resistance to PTH is similar but generally more aggressive than that of primary hypoparathyroidism. 1. Linglart A, Levine M, Juppner H. Pseudohypoparathyroidism. Endocrinol Metab Clin North Am 2018; 47: 865-888. 2. Mantovani G, Bastepo M, et al. Diagnosis and treatment of pseudohypoparathyroidism and related disorders: first declaration of international consensus. Nat Rev Endocrinol. 2018; 14 (8): 476-500.