Results: Two hundred seventy-five nodules among 195 adults (86.2% were women) were included in the analysis. Twelve nodules were malignant, with an associated malignancy rate of 4.4%. TI-RADS had higher accuracy based on AUC of 0.710 compared to 0.623 using ATA guidelines. TI-RADS also had a higher PPV of 21.4% among nodules with 9 points, versus 5.8% among nodules in the ATA “high suspicion” category. Ultrasound characteristics with the highest Sp, relative PPV and NPV were: microcalcifications (84.5%, 4.3%, 96.0%, respectively), taller-than-wide (81.7%, 7.1%, 96.7%), irregular margins (77.7%, 6.0%, 96.5%); the characteristic with the highest Sn was hypoechogenicity (83.3%), however this had relatively low Sp (25.4%) and PPV (4.5%).

Conclusions: TI-RADS performed better with higher overall accuracy and PPV when applied to nodules classified as having the highest malignancy risk. Taller-than-wide shape, irregular margins, and microcalcifications were the characteristics most useful for malignancy risk stratification. Limitations of this study include: interobserver bias, small sample size, referred patient population (which may differ from other institutions), and inability in some cases to confirm malignant FNA cytology with surgical pathology.

Bone and Mineral Metabolism

BONE AND MINERAL CASE REPORTS I

A Case of PTHrP-Negative Hypercalcemia of Malignancy
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SAT-LB63
Case Presentation:
A 55-year-old male who had recently arrived from Haiti presented to the Emergency Department with chief complaint of a progressively enlarging neck mass. He first noticed the mass in 2000. From 2000-2017, he underwent resection of the mass three times in Haiti, with recurrence after each surgery. On presentation, he reported unintentional 10 kg weight loss over several months and night sweats. Endocrine was consulted for evaluation of hypercalcemia. On examination and imaging, 8.7 x 14.0 x 14.0 cm fungating tumor on the nape of his neck extending to the occipital area and cervical lymphadenopathy were noted. Labs were notable for WBC of 21.7 K/uL, hemoglobin of 6.0 g/dL, calcium of 12.0 mg/dL, albumin of 3.1 g/dL, free calcium of 6.4 mg/dL, corrected calcium of 12.6 mg/dL, phosphorus of 2.6 mg/dL, and intact PTH of < 4 pg/mL. The PTH-related peptide (PTHrP) level was found to be normal at 19 pg/mL (reference range 14-27 pg/mL). SPEP was normal. Neck mass and cervical lymph nodes were biopsied. Histopathological examination of neck mass showed an ulcerated, moderately-differentiated squamous cell carcinoma with multifocal areas of necrosis. There was no evidence of malignancy in the cervical lymph nodes. CT scan showed 3 mm lung nodules, thought to be granulomas, and no clear evidence of metastatic disease.

Diabetes Mellitus and Glucose Metabolism

CLINICAL AND TRANSLATIONAL STUDIES IN DIABETES

Cgm in Cystic Fibrosis Patients to Predict Cystic Fibrosis-Related Diabetes Onset
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MON-LB114
Background: Therapeutic progress and improvement on resources enabled the emergence of new comorbidities in cystic fibrosis (CF), such as cystic fibrosis-related diabetes (CFRD). About 20% of adolescents and 40-50% of adults are affected. CFRD and glucose intolerance reduce life expectancy in this population, highlighting the importance of early diagnosis and treatment. Up to 15% of CF patients have hypoglycemia during OGTT and its etiology remains unclear. Some authors associate hypoglycemia with CFRD onset, while others do not agree with this association. Objective: To determine whether abnormal CGM (hypo/hyperglycemia) can predict CFRD onset, pulmonary function and BMI decline in CF patients. Methods: Prospective single center study. All CF patients between 10-19yo from our outpatient clinic were screened for CFRD through OGTT following the World Health Organization (WHO) protocol. The enzymatic colorimetric method was used to

Hypercalcemia was treated with IV hydration and one dose of bisphosphonate and patient underwent resection of neck mass. Immediately after surgery, his calcium level precipitously decreased and has remained normal in the months since surgery.

Discussion: Hypercalcemia of malignancy is a common finding affecting up to 44.1% of patients with malignancy (1,2). The major mechanism, accounting for approximately 80% of malignancy-related hypercalcemia, is mediated via PTHrP, which can cause hypercalcemia by increasing bone resorption and renal tubule calcium reabsorption (2). Squamous cell carcinoma (SCC), especially of the lungs, breast, or GI tract, is more frequently associated with hypercalcemia. There are also several case reports of primary cutaneous SCC associated with hypercalcemia. In these cases, tumors were large and hypercalcemia was thought to be due to elevated PTHrP (3,4,5). The skin has been shown to express PTHrP and PTHrP receptors (6,10). PTHrP has also been detected in 100% of cutaneous SCCs even in the absence of hypercalcemia (6,7). Furthermore, PTHrP mRNA has been localized in 100% of squamous tumors with hypercalcemia and PTHrP peptide were detected in 91% of cases in a study of 11 patients (9). The patient presented in this case did not have an elevated level of PTHrP. However, resolution of hypercalcemia with resection of the mass supports a diagnosis of hypercalcemia of malignancy. This case illustrates that hypercalcemia due to primary cutaneous SCC typically, but not always, results in an elevated serum PTHrP level.

MON-LB114
Background: Therapeutic progress and improvement on resources enabled the emergence of new comorbidities in cystic fibrosis (CF), such as cystic fibrosis-related diabetes (CFRD). About 20% of adolescents and 40-50% of adults are affected. CFRD and glucose intolerance reduce life expectancy in this population, highlighting the importance of early diagnosis and treatment. Up to 15% of CF patients have hypoglycemia during OGTT and its etiology remains unclear. Some authors associate hypoglycemia with CFRD onset, while others do not agree with this association. Objective: To determine whether abnormal CGM (hypo/hyperglycemia) can predict CFRD onset, pulmonary function and BMI decline in CF patients. Methods: Prospective single center study. All CF patients between 10-19yo from our outpatient clinic were screened for CFRD through OGTT following the World Health Organization (WHO) protocol. The enzymatic colorimetric method was used to
classify them as per the ADA. Non-diabetic CF patients performed 3-day CGM, forced expiratory volume in the first second (FEV1), BMI and OGTT. All tests except for CGM were then reassessed after a long follow-up. The WHO’s 2006 curve was used to calculate the z scores for individuals ≤19yo and WHO cut-off values for >19yo. Oral corticoid use during data collection, pregnancy and solid organ transplantation were exclusion criteria. **Results:** Thirty-nine patients were recruited and 34 completed an average of 3.1 years (±0.51) follow-up. No clinical or laboratory variables could predict diabetes progression or hypoglycemic events. The cohort had an increase in mean BMI (17.80±3.65 vs 18.36±3.49; p=0.025) and a reduction in mean FEV1 (66.91±25.79% vs 56.32±29.57%; p=0.001) between the two evaluations. Patients who developed diabetes showed statistically significant worse FEV1 in the end of the follow-up (22.67±5 vs 59.58±28.9; p=0.041), and lower BMI at both start (14.37±1.29 vs 18.13±3.65; p=0.049) and end (14.81±0.66 vs 18.71±3.46; p=0.029) of follow-up. A logistic regression of the effect of time adjusted for independent variables for progression to CFRD was conducted. A higher possibility of evolution among participants with IGT (odds ratio [OR] 21.67; 95% confidence interval [CI] 7.03-67.36; p<0.01), and a lower possibility among participants with NGT (OR 1.84; 95% CI 1.06-3.19; p=0.031). **Conclusion:** CGM was not a useful tool to predict early diabetes onset in this population with the current cut-off values. However, the IGT group seems to be the riskiest group. The CF population has particular characteristics and may not have the same diagnostic criteria for DM as the non-CF population. More studies are necessary to determine the appropriate CGM cut-off values for CFRD.

**Adrenal**

**ADRENAL CASE REPORTS III**

**Challenge in Diagnosing and Treating of Mediastinal Paraganglioma**

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**MON-LB040**

Challenge in Diagnosing and Treating of Mediastinal Paraganglioma Background Paraganglioma is a rare type of neuroendocrine tumor of the autonomic nervous system.³ It is extremely rarely present in mediastinum (less than 2%).³ Case report We report a 43 years-old woman, she was referred to our clinic with a history of high blood pressure (BP) for two years, accompanied by spellsof sweating, headache, anxiety and palpitation. She was provisional diagnosed with essential hypertension and was on four medications on maximum dose. The patient declined any previous surgical history, and review of systems was unremarkable. On examination, she was conscious and alert. Her vitalsigns were within normal limit. She reported to our clinic with homereadings of BP ranging from 150-180 mmHg systolic and 90-100 mmHg diastolic. Initial investigations of basic chemistry, renal profile, hormonal profile, aldosterone, and renin were within the normal range. Serum Normetanephrine was 800 ng/L (normal < 180 ng/L), 24 hours urine of Normetanephrine was 5205 microgram/24 hours (normal < 600 microgram/24 hours), and 24 hours urine Metanephrine was within normal. CT scan of the adrenal and MRI abdomen showed normal adrenalglands and no mass in the abdomen. MIBG scan was normal for the wholebody. An unusual location of the Paraganglioma was suspected, and further images were carried on. A CT chest showed 4x4 cm posteriormediastinal mass in area of Aortopulmonary window, adherent toposterior wall of Aorta and pulmonary artery. Positron Emission Tomography (PET) scan was done prior to the surgery. Surgical resection of the mass with reconstruction of both pulmonary artery and pericardium was done without any complications. Moreover, histopathology confirmed the diagnosis of Paraganglioma. The patient was followed up with a CT scan six months postoperatively as an outpatient, along with 24-hour urine Metanephrine and Normetanephrine. All labs and imaging were normal. The patient had another Normetanephrine measurement twelve months later and it was normal. Now, she has been followed for seven years with no moresymptoms and normal BP readings. All of her antihypertensive agents were discontinued. Conclusion We experience an unusual location of Paraganglioma at the mediastinum, which is representing less than 2% of all Paraganglioma. However, in the presence of characteristic of Paraganglioma symptoms, a thorough assessment should be carried out and such location of mediastinum should be suspected and investigated. References: 1. Institute NC. Pheochromocytoma and Paraganglioma Treatment(PDQ®)- Health Professional Version. https://www.cancer.gov/types/ pheochromocytoma/hp/pheochromocytoma-treatment-pdq. Published 2019. Accessed February 1, 2020. 2. Paraganglioma: An Uncommon Cause of Mediastinal Mass. -PubMed - NCBI. https://www.ncbi.nlm.nih.gov/pubmed/32000513. Accessed February 1, 2020.

**Neuroendocrinology and Pituitary**

**CASE REPORTS IN SECRETORY PITUITARY PATHOLOGIES, THEIR TREATMENTS AND OUTCOMES**

**Persistent vs Recurrent Cushing’s Disease Diagnosed Four Weeks Post-Partum**

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**SAT-LB49**

**Background:** Cushing’s disease (CD) recurrence in pregnancy has previously been described and is thought to be associated with predictable estradiol fluctuations during gestation. CD recurrence in the immediate post-partum period has been reported once, but never in a patient with documented dormant disease during pregnancy. Clinical Case: A 30 year old woman with recently diagnosed pre-diabetes presented with weight gain, dorsal hump, depression, oligomenorrhea, and lower extremity weakness.