dissection, with pathology confirming bilateral MTC (2.7 cm and 1.0 cm), metastatic in 4 of 10 positive lymph nodes (largest focus 2 mm). Whole body PET/CT post-operatively did not show metastatic disease. The patient’s son also had multiple thyroid nodules on ultrasound without lateral nodal metastases and elevated calcitonin and CEA levels (3015 pg/ml, normal ≤10, and 433 ng/mL, normal <2.5, respectively). MRI of the abdomen and pelvis was negative for pheochromocytomas. He underwent total thyroidectomy and bilateral central neck dissection, with pathology showing bilateral MTC (2.7 cm and 1.0 cm) with 0 of 14 positive lymph nodes. For both the patient and his son, calcitonin and CEA levels normalized following thyroidectomy and surveillance over a year later reveals no evidence of disease. Conclusion: Early diagnosis of MEN type 2B is important as MTC develops early in life and is the leading cause of death in these patients. When diagnosed early, prophylactic thyroidectomy in childhood is indicated and can improve long-term survival. There are salient phenotypic features associated with this disease which were unfortunately not recognized early in this patient and his son. Fortunately, their MTC presentations appear to be relatively indolent despite their late diagnoses, and they will continue to be closely monitored for recurrent disease.

Thyroid

THYROID NEOPLASIA AND CANCER

The Impact of The Association of Unnecessarily Ordered Thyroid Ultrasounds (USGs) and Unnecessarily Requested Endocrinology Consultations

Ravali Veramachaneni, M.D. 1, Raghda Al Anbari, MD 2, Nadiia Marenych, MD 3, Sabah Patel, MD 3, Alvia Moid, DO 3, Boby George Theckedath, MD 6, Charles P. Barsano, FACE,MD,PHD 7.

1Rosalind Franklin University of Medicine and Science, North Chicago, IL, USA, 2Chicago Medical School at Rosalind Franklin University of Medicine and Science, Lake Bluff, IL, USA, 3Chicago Rosalind Franklin University McHenry, Crystal Lake, IL, USA, 4Rosalind Franklin University of Medicine and Science, Chicago, IL, USA, 5Captain James A Lovell Federal Health Care Center, Libertyville, IL, USA, 6VA Medical Center, Kenosha, WI, USA, 7Chicago Med Sch, Chicago, IL, USA.

MON-529

We have previously reported that there is a strong association between unnecessarily ordered thyroid USGs and unnecessarily requested Endocrinology (Endo) consultations. Unnecessary consultations consume time and resources, delay appropriate consultations, and have even been proposed as a factor in the over-diagnosis of clinically innocuous thyroid cancers. We have examined the impact on the consumption of clinical resources.

The database consisted of 201 new Endo consultations, each accompanied by a pre-consult thyroid USG. The consult requests were graded as appropriately requested (APPROP), optionally requested (OPT), or unnecessarily requested (UNNEC). The USG requests were likewise graded as APPROP, OPT, or UNNEC. The USGs were also graded on their degree of contribution to the request for a consultation, specifically, as having a significant role (SIGNIF), a minor role (MIN), or little or no role (NONE). The impact of the UNNEC consults was categorized as (a) the initial Endo consult, a resource that would have been utilized were an UNNEC consult not submitted, and (b) resources that probably would have been utilized were the UNNEC consults not submitted but would have been managed by and costed to the referring provider instead of to the Endo provider. Such resources included follow-up Endo visits and relevant USGs and blood tests.

Of the 201 consults with associated USGs, 156 (77.6%) consults were APPROP, 23 (11.4%) were OPT, and 22 (10.9%) were UNNEC. Conversely, 157 (78.1%) of the USGs were APPROP, 11 (5.5%) were OPT, and 33 (16.4%) were UNNEC. With respect to the association of consults with their accompanying USGs, Among APPROP requested consults, 87.8% of the associated USGs were also APPROP while only 7.7% were associated with UNNEC USGs. Among UNNEC requested consults, 31.8% of the associated USGs were APPROP while 68.2% were associated with UNNEC USGs.

Regarding the resource utilization borne by an Endo clinic as a consequence of the submission of 21 UNNEC consults for the two years after the initial consultation, each UNNEC consult had consumed, on average, 5.9 (1 + 2.6 + 2.3) [initial + Yr 1 + Yr 2 follow-ups] Endo clinic visits, 0.9 (0.5 + 0.4) USGs [excludes the USG associated with initial consultation] and 4.1 (2.2 + 1.9) blood work orders and reviews. No follow-up FNAs or thyroid surgeries were performed. Endocrine care from any source would be best served by reducing both the unnecessary utilization and the unnecessary assignment of relevant resources.

Adrenal

ADRENAL - TUMORS

Clinical Presentations and Outcomes of Adrenal Metastases Vary Based on Etiology

Jimmy Mao, MD, Irina Bancos, MD.
Mayo Clinic, Rochester, MN, USA.

SAT-154

Background: Adrenal metastases occur in 1–8% of patients with an adrenal mass. Recognizing patterns in the presentation of adrenal metastases is critical in dictating management.

Objective: To describe the presentation of patients with adrenal metastases and identify baseline characteristics predicting the etiology.

Methods: A retrospective analysis of adult patients diagnosed with adrenal metastases between 2000–2019 at a single institution tertiary center was performed. Partial cohort analysis is presented.

Results: In 327 patients (127 (39%) women, median age at diagnosis of 67 years (range 25–92), median tumor size was 2.7 cm (range 0.5–15), and 99 (30%) had bilateral tumors. While most patients (188, 57%) were found to have an adrenal mass during cancer staging, 117 (36%) were found incidentally and 22 (7%) based on symptoms. Adrenal metastases originated from the lung (118, 36%), genitourinary (GU) (100, 31%), gastrointestinal (GI) (47,
Reproductive Endocrinology

MALE REPRODUCTIVE CASE REPORTS

Unusual Presentation of Aromatase Excess Syndrome
Farah Laith Al Sabie, M.B.Ch.B.1, Hagop Gharebian, M.B.Ch. B.2, Cary N. Mariash, MD3.
1Indiana University, Indianapolis, IN, USA, 2 McLaren Hlth Care Corp, Grand blanc, MI, USA, 3 Methodist Research Institute, Indianapolis, IN, USA.

SUN-026
Introduction: Aromatase excess syndrome is a rare disorder with gynecomastia being the main symptom. Its prevalence is unknown with approximately twenty cases reported. We describe an unusual case of Aromatase excess syndrome. It was diagnosed incidentally at a much older age than expected while evaluating for hypersomnia.
Case presentation: A 28 year old male with no significant past medical history, presented with complaint of hypersomnolence, developed during puberty. He had multiple evaluations with no apparent etiology; sleep study and all his other laboratory tests were normal including testosterone levels, normal IGF-1 and cortisol. When patient was evaluated in the Endocrine clinic, he was found to have a bilateral gynecomastia, which he had for many years. His estradiol was 150 pg/ml (Normal <50 pg/ml). Repeat was 137 pg/ml with normal DHEA-S Subsequent concomitant estradiol of 204 pg/ml with an estrone of 35.7 pg/ml (9–36).

Total testosterone was normal at 588 ng/dl. Evaluation for a tumor with abdominal CT, testicular ultrasound, and HCG was negative. As his symptoms of fatigue and hypersomnolence were not improving and his estradiol to testosterone ratio was >10, he was started on an aromatase inhibitor and his ratio dropped from 1:40 to 1:24, as his estradiol went down to 75 pg/ml. Discussion: Gynecomastia is the benign proliferation of breast tissue due to imbalance between estrogen and testosterone. It could be caused by medications or medical illnesses. Occasionally its presence can harbor a serious endocrine issue especially if presenting in the prepubertal period. Thus, evaluation is often necessary. Among the pathological causes is the Aromatase excess syndrome. In this syndrome there are three types of cryptogenic genomic rearrangements identified. Those rearrangement affect the aromatase gene CYP19 and results in gain of function of the aromatase enzyme. Patients will have high estradiol and estrone level, lower FSH and LH levels that will normalize after treatment with aromatase inhibitor. Their testosterone levels could be low or normal. For the clinical diagnosis, there are four criteria; bilateral gynecomastia, pre or peripubertal onset, exclusion of other causes of gynecomastia and having a genetic trait. The first three criteria are indispensable for diagnosis while fourth one is not obligatory, but rather pathognomonic. An elevated estradiol to testosterone ratio above 1:10 is a supportive finding, as well as having a low FSH with low normal LH. Genetic identification of the CYP19 A1 mutation remains the definitive method of diagnosis. Our patient met the first three criteria and also had estradiol to testosterone ratio is > 1:10. Genetic confirmation is challenging. Consequently, whole genome sequencing may be required. Though unusual, this case highlights the importance of looking deep in the differential when evaluating gynecomastia.

Bone and Mineral Metabolism

BONE AND MINERAL CASE REPORTS I

Autoimmune Polyglandular Syndrome Type 1 in a Patient with Bipolar Disorder
Aakash Rajwani, MD, Ari Eckman, MD.
Rutgers New Jersey Medical School/Trinitas Regional Medical Center Program, Elizabeth, NJ, USA.

SAT-333
Autoimmune Polyglandular Syndrome Type 1 (APS-1) is clinically defined as the presence of at least two components of the classic triad of hypoparathyroidism, adrenal insufficiency and mucocutaneous candidiasis. It is commonly seen amongst Finns, Sardinians and Iranian Jews and is a very rare condition, with a challenging set of management. 50-year old female with a known past medical history of Bipolar disorder, Primary Adrenal Insufficiency, Hypothyroidism, Alopecia was transferred from an acute psychiatric facility for medical clearance. Patient was noted to have findings initially suggestive of Subarachnoid Hemorrhage on a CT scan of the Head which was later