**Case report:** 18 years old female with type one diabetes on insulin pump present with epigastric abdominal pain for three days associated with nausea and vomiting of three days duration. On examination; conscious alert oriented young female looks in pain, vital sign were stable temperature 37°C, heart rate 89 beat per minute, blood pressure 103/72 mmHg, respiratory rate 20 per minute, oxygen saturation 100% and random blood sugar (RBS) 179 mg/dL. Abdominal examination revealed soft and lax abdomen with tenderness in the epigastric area and right renal angle. No sign of rigidity or rebound tenderness. Bowel sound was present. No sign of ascites, splenomegaly or hepatomegaly. Investigations showed; WBC: 10.2, neutrophil 65%, urinalysis WBCs 30-50 per high field microscopy, RBC 5-10, PH 7, negative nitrate and culture did not show any growth. ESR was 48 and CRP was 4.2. Thrombophilic screen was done and all within normal. Computed tomography (CT) revealed reduced enhancement of right kidney likely indicating acute pyelonephritis and portal vein edema with complete occlusion of left branch of portal vein. Local factors and prothrombotic disorders were ruled out. The patient was managed with ciprofloxacin, enoxaparin and warfarin. The patient was symptomatic free and discharge home with a therapeutic range INR.

**Conclusion:** Portal vein thrombosis is uncommon condition in absence of liver diseases. Few case report linking between sepsis and portal vein thrombosis. Sepsis can create a predisposed environment for hypercoagulability.

### Neuroendocrinology and Pituitary

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

**Accelerated Osteoporosis - a Rare Presentation of Cushing’s Disease**

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**SAT-266**

Background:
Osteoporosis in post-menopausal women is usually due to bone loss from estrogen deficiency and/or age. Secondary osteoporosis (SO) is less common. Up to 30% of postmenopausal women and 50% of men with osteoporosis may have an underlying cause. Cushing’s disease (CD) is one cause of SO but rarely the presenting symptoms. The prevalence of osteoporosis (69.6% vs 37.8%) is significantly higher in patients with adrenal rather than pituitary CD. Diagnosing CD remains a challenge to physicians in spite of advances in diagnostic techniques. We report a case of CD in a post-menopausal woman presenting as accelerated osteoporosis. Clinical Case

A 63-year-old Caucasian female with a history of hypertension and hysterectomy in her 50s on transdermal estrogen was referred to our Endocrine clinic for evaluation of osteoprosis and incidental finding of bilateral adrenal hyperplasia on CT spine. The patient rapidly developed kyphoscoliosis within the past 2 years. She was debilitated by pain and decreased mobility from compression fractures and spinal stenosis, and underwent thoracic and lumbar fusion surgery.

On physical examination, her heart rate was 64 beats per minute, blood pressure 130/92 mmHg, weight 188 lbs. and height 5.1 ft; a year ago it was 5.5 ft. Her face appeared round but not red. Buffalo hump and supravacular pad were noted. No striae or bruises noted. Healing surgical scars over the thoracic and lumbar spine were violaceous. The patient’s urine free cortisol levels, tested a month apart, were 190 mcg and 132 mcg (n 3.5-45 mcg/24h). Midnight salivary cortisol levels taken consecutive nights were 160 ng/dL and 513 ng/dL, (< 100 ng/dL). Morning Serum Cortisol and ACTH were 20.2 ug/dL and 14 pg/mL (n Cortisol 6.0-27.0 ug/dL and ACTH 7.2-63 pg/mL). Following low dose (1mg) dexamethasone suppression testing, her serum cortisol were 12.6 ug/dL, ACTH levels were 32 pg/mL and dexamethasone were 187 ng/dL (< 30 ng/dL).

25-Hydroxy D total, TSH, Free T4, PTH intact, calcium, renin, aldosterone and SPEP levels were normal. Renal and liver functions were normal except alkaline phosphatase was 142 U/L (n 34-104 U/L). Pituitary MRI with contrast showed pituitary microadenoma. The patient was referred to a neurosurgeon and is planned for an inferior petrosal sinus sampling prior to transsphenoidal resection.

**Conclusion**

Cushing’s disease as a cause of osteoporosis is rare. Diagnosis of Cushing’s can be challenging in patients without obvious signs, as in our patient who was referred to an endocrinologist due to incidental finding of bilateral adrenal hyperplasia. A high degree of clinical suspicion is needed when investigating CD, as initial test results can be indecisive. As in our patient, initial ACTH and cortisol levels were normal, the low dose dexamethasone suppression test helped us direct our diagnosis towards CD.

### Thyroid

**THYROID CANCER CASE REPORTS II**

**Prophylactic Thyroidectomy in a Patient with Codon 891 Mutation of the RET Proto-Oncogene**

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**MON-450**

Background: Medullary thyroid cancer (MTC) is a neuroendocrine tumor of the parafollicular or C cells of the thyroid gland, accounting for 1-2% of thyroid cancers in the United States. About 25% MTCs are familial as a part of the MEN2 syndrome or familial MTC (FMTC). Germline mutations in codon 891 are predominantly associated with FMTC. Case: 65-year-old Caucasian male was referred to the Endocrinology clinic after bilateral thyroid nodules were found on thyroid US. The patient had requested an ultrasound of his thyroid after his brother was diagnosed with MTC following fine-needle aspiration for an incidental thyroid nodule prompting total thyroidectomy and genetic testing. The patient’s brother was found to be heterozygous for RET mutation (c.2617T>G;pSer891Ala). This resulted in screening of the other siblings including this patient, also found to be heterozygous for this mutation. Both parents were deceased, and their clinical history is not known. Only one of the remaining two siblings had genetic testing; one brother refused testing for the mutation and one sister was positive for the mutation but had no thyroid.
A retrospective cross-sectional analysis was undertaken of transmasculine individuals at a primary and secondary care clinic in Melbourne, Australia. 180 individuals who were on testosterone therapy for >6 months were included. Groups included those receiving (1) intramuscular testosterone undecanoate (n=125), (2) intramuscular testosterone enantate (n=31), or (3) transdermal testosterone (n=24). Outcome was prevalence of polycythemia (defined as haematocrit >0.5).

Results: Mean age was 28.4 (8.8) years with a median duration of testosterone therapy 37.7 (24.2) months. 27% were smokers. There was no difference between groups in serum total testosterone concentration measured. Whilst there was no difference between groups in haematocrit, there was a higher proportion of patients with polycythemia in those who were on intramuscular testosterone enantate (23.3%) than on transdermal testosterone (0%), p=0.040. There was no statistically significant difference in polycythemia between intramuscular testosterone undecanoate (15%) and transdermal, p=0.066 nor between intramuscular testosterone enantate and undecanoate, p=0.275.

Conclusions: One in four individuals treated with intramuscular testosterone enantate and one in six treated with testosterone undecanoate had polycythemia. No individual treated with transdermal testosterone had polycythemia. This highlights the importance of regular monitoring of haematocrit in transmasculine individuals treated with testosterone and findings may inform treatment choices.

Bone and Mineral Metabolism
BONE AND MINERAL CASE REPORTS II

Isolated Extrapulmonary Sarcoidosis Presenting as Symptomatic Hypercalcemia
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MON-340
Introduction: Sarcoidosis is a granulomatous disease of unknown etiology often involving multiple organ systems. Sarcoidosis most frequently affects the lungs, but in up to 30% of cases, can present with extrapulmonary manifestations. Less than 10% of patients with sarcoidosis present with disease at extrapulmonary sites. 10%-20% patients with sarcoidosis present with hypercalcemia. Hypercalcemia in sarcoidosis is secondary to increased intestinal calcium absorption due to increased levels of 1,25-dihydroxy Vitamin D. Clinical Case: 71-year-old Caucasian male presenting to his primary care physician with 3-week duration of fatigue, anorexia, mild confusion and unintentional weight loss was found to have moderate hypercalcemia and acute kidney injury. He was admitted the hospital for evaluation and management. Labs at admission revealed albumin-corrected calcium of 13.5 mg/dL (normal 8.5-11.0 mg/dL), creatinine of 1.78 mg/dL (normal 0.7-1.3 mg/dL) and alkaline phosphatase of 173 U/L (normal 45-117 U/L). Workup noted low PTH (3 normal 14-72 pg/mL), normal 25-hydroxy Vitamin D (50.7 normal 30-100 ng/dL), normal PTHrP and normal serum electrophoresis and immunofixation indicating non-PTH dependent hypercalcemia. 1,25-dihydroxy Vitamin D (125, normal 18-64 pg/mL) and ACE levels (159 U/L, normal 25-60 U/L) were elevated. Patient denied being on any Vitamin D supplements. A CT chest, abdomen and pelvis was done to look for occult malignancy and hepatosplenomegaly was noted with only mild compressive atelectasis of lungs. Abdominal ultrasound confirmed hepatomegaly with lobulated outer contour consistent with cirrhosis. Acute hepatitis, infectious and autoimmune workup was negative. Patient was discharged with mild improvement in calcium and mental status with hydration.

Reproductive Endocrinology
TRANSGENDER MEDICINE AND RESEARCH

Prevalence of Polycythemia with Different Formulations of Testosterone Therapy in Transmasculine Individuals
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SUN-046
Background: Masculinising hormone therapy with testosterone is used to align an individual's physical characteristics with their gender identity. Testosterone therapy is typically administered via intramuscular or transdermal routes and polycythemia is the most common adverse event.

Aims: To compare the risk of polycythemia with different formulations of testosterone therapy in transmasculine individuals.

Methods: A retrospective cross-sectional analysis was undertaken of transmasculine individuals at a primary and secondary care clinic in Melbourne, Australia. 180 individuals who were on testosterone therapy for >6 months were included. Groups included those receiving (1) intramuscular testosterone undecanoate (n=125), (2) intramuscular testosterone enantate (n=31), or (3) transdermal testosterone (n=24). Outcome was prevalence of polycythemia (defined as haematocrit >0.5).