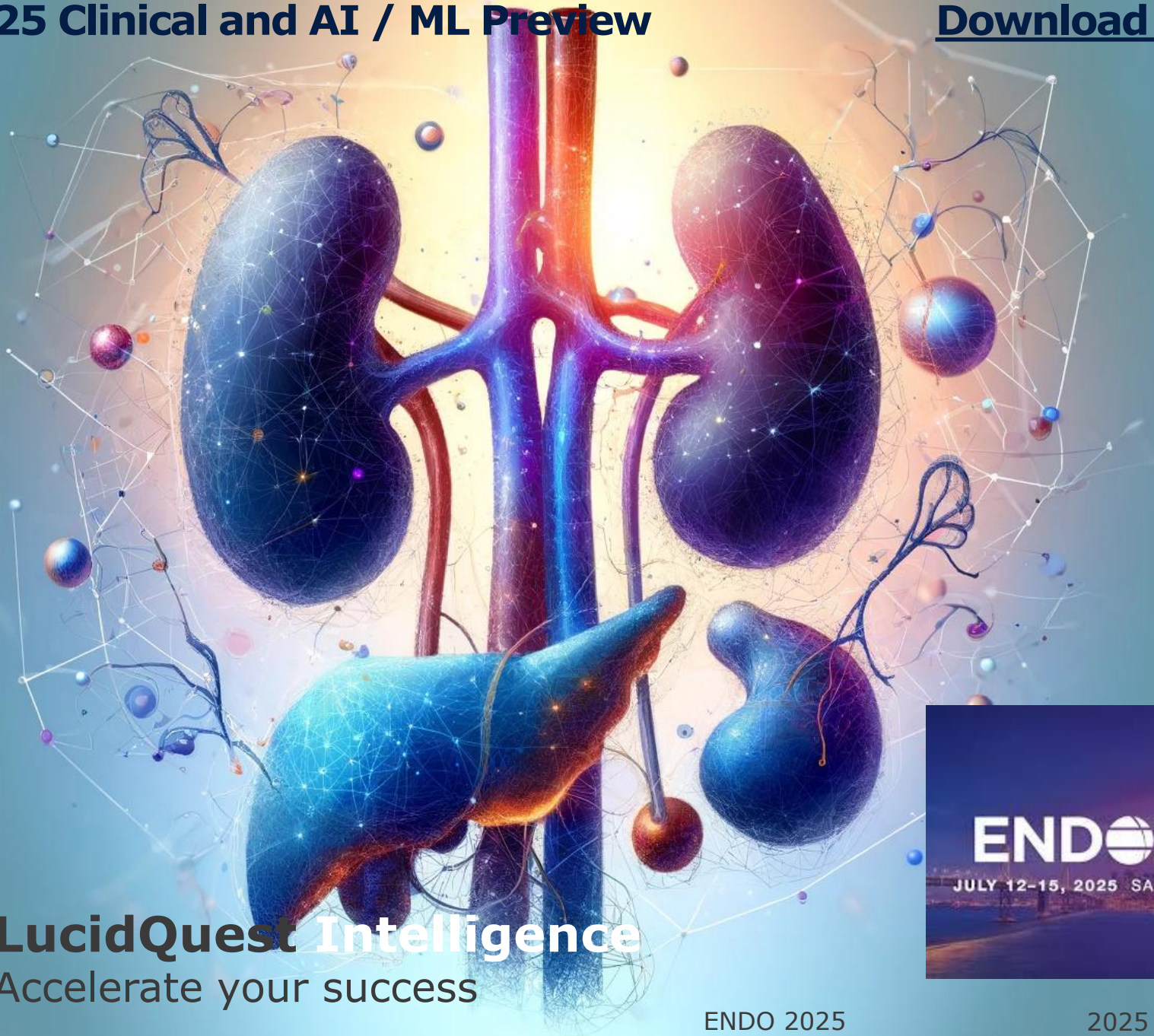




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ENDO 2025 – General Overview



- **Global Gathering:** Over 7,000 participants from around the globe will come together in San Francisco to engage with the latest in endocrinology, providing an opportunity for diverse professional collaboration and growth



- **Scientific Presentations:** With nearly 2,500 abstracts being presented, ENDO 2025 will be a major venue for showcasing groundbreaking research in endocrinology. Topics will cover molecular advances, clinical interventions, and new treatment paradigms



- **Educational Sessions:** More than 200 educational sessions, including plenaries, symposia, and workshops, will be offered. These will focus on the latest advancements in disease management, diagnostic tools, and treatment techniques in endocrinology



- **Exhibition:** The ENDOExpo will feature state-of-the-art products and services for endocrine care, bringing together industry leaders and innovators to demonstrate the latest tools, technologies, and therapies available in the market



- **Professional Development:** Workshops will cater to professional growth, addressing topics like leadership, career advancement, and developing specific skills to excel in endocrinology and clinical practice.





ENDO 2025– Conference Themes (1/2)

- **Genomics and Healthcare:** Genomic data will drive personalized treatments for endocrine diseases, enabling precision medicine approaches
- **Obesity Management:** New therapeutic strategies, including pharmacological and lifestyle interventions, will target obesity and metabolic disorders
- **Reproductive Health:** Discussions will explore advances in reproductive endocrinology, including aging, hormonal disorders, and emerging treatments
- **Diabetes and Metabolism:** Focus will be on novel diabetes therapies, understanding metabolic disease mechanisms, and precision treatment strategies
- **Neuroendocrinology:** Exploration of brain-hormone interactions, emphasizing stress, mood regulation, and health impacts
- **Environmental Endocrinology:** Research will focus on endocrine-disrupting chemicals and their long-term effects on reproductive and metabolic health





ENDO 2025– Conference Themes (2/2)

- **Tumor Biology:** New insights into endocrine-related cancer biology and innovative therapeutic approaches will be presented
- **Bone and Mineral Metabolism:** Advances in osteoporosis treatment and bone health management for older adults and patients with comorbidities
- **Cardiovascular Endocrinology:** Hormonal influences on heart disease will be explored, with a focus on prevention and treatment
- **Pediatric Endocrinology:** The latest developments in diagnosing and managing pediatric endocrine disorders like diabetes and growth issues
- **Thyroid Biology and Cancer:** The understanding of thyroid function and cancer will be deepened, with a focus on treatment advances
- **Adipose Tissue and Appetite:** New research into fat cell behavior and appetite regulation will influence weight management strategies



Noteworthy Scientific presentations at ENDO 2025





Key Topics From Notable Presentations (1/7)



- **Endocrine Disorders & Pituitary Disease:** Sessions will highlight how pituitary disorders significantly impact quality of life, with specialized care and early diagnosis essential, especially for complex conditions like MEN1 and pituitary dysfunction following TBI
 - Pituitary Dysfunction and Quality of Life: A cross-sectional survey reveals high levels of sleep disturbances, anxiety, and fatigue in pituitary dysfunction patients, highlighting the importance of tailored diagnostic and therapeutic interventions
 - MEN1 Prevalence and Management in New Zealand: The study found MEN1's prevalence in New Zealand matches global trends, with a focus on genetic factors, surveillance, and individualized care strategies, improving patient outcomes
 - Pituitary Dysfunction in TBI Survivors: A study on male TBI survivors identifies pituitary dysfunction as common, particularly low testosterone, with radiological findings predicting dysfunction, emphasizing the need for targeted monitoring



Key Topics From Notable Presentations (2/7)



- **Congenital & Adrenal Disorders:** Studies at the conference will highlight the targeted therapies like crinecerfont and Lu AG13909 that can offer significant advancements in managing congenital adrenal hyperplasia, while addressing modifiable risk factors can help prevent adrenal adenomas
 - **Crinecerfont in CAH Treatment:** Crinecerfont, a CRF1 antagonist, significantly reduced GC doses while maintaining or improving androgen levels in pediatric CAH patients, offering a promising approach for managing androgen excess in CAH
 - **Lu AG13909 in CAH Management:** Lu AG13909, an anti-ACTH monoclonal antibody, demonstrated efficacy in reducing androgen levels and glucocorticoid doses, providing a novel treatment approach for adults with CAH
 - **Adrenal Adenomas Risk Factors:** Increased BMI, tobacco use, and impaired glucose metabolism were strongly linked to higher odds of developing adrenal adenomas, suggesting potential modifiable risk factors for prevention



Key Topics From Notable Presentations (3/7)



- **Thyroid Disorders:** The spotlight will be on thyroid disorders such as FNMTC, DTC, and thyroid storm that can significantly impact patient quality of life and prognosis, highlighting the need for tailored diagnostic and treatment strategies
 - Impact of Familial Non-Medullary Thyroid Cancer (FNMTC) on Quality of Life: FNMTC patients reported worse quality of life, particularly related to hypothyroid symptoms, cosmetic issues, and eye symptoms, while unaffected relatives showed no significant impact
 - TgAb-positivity as a Risk Factor in DTC Prognosis: TgAb-positivity in differentiated thyroid cancer (DTC) patients correlates with an increased risk of persistent/recurrent disease, with lymphocytic thyroiditis being the strongest predictor
 - Thyroid Storm and Therapeutic Plasma Exchange (TPE): TPE effectively reduces thyroid hormones and liver enzymes, with a 5.7% mortality rate, mainly in thyroid storm cases, demonstrating its potential in treating severe thyrotoxicosis



Key Topics From Notable Presentations (4/7)



- **Diabetes & Obesity:** The conference will highlight integrating advanced diabetes management tools like CGM into underserved populations that can improve outcomes significantly, but there are ongoing disparities in treatment access and long-term care that need attention
- **PCOS, IGT, and Birthweight Outcomes in Pregnancy:** The study highlights higher prevalence of impaired glucose tolerance (IGT) and preeclampsia in pregnant women with PCOS. Birthweight was lower in women with both PCOS and IGT, with the lowest in this group
- **Diabetes and Stroke-Related Mortality Trends:** Mortality rates for diabetes and stroke have decreased, with the steepest declines seen in the Northeast. However, significant disparities persist by race, gender, and geography, indicating the need for targeted interventions
- **CGM Impact on Glycemic Control in Underserved T2D Patients:** Continuous glucose monitoring (CGM) significantly reduced A1c levels in underserved T2D patients without insurance coverage for CGM, showing its potential for improving glycemic control in these populations



Key Topics From Notable Presentations (5/7)



- **Endocrine Cancer & Bone Health:** Experts will discuss Denosumab and appropriate management of bone health post-surgery or cancer treatment are crucial for preserving bone structure, but careful monitoring is required to manage risks like SREs and vascular complications
- **Denosumab Discontinuation and Skeletal-Related Events (SREs):** Following denosumab cessation, skeletal-related events (SREs) increased significantly, with a rise from 2.9% during treatment to 8.8%. Osteonecrosis of the jaw (ONJ) occurred in 16.2% of patients during treatment
- **Denosumab Effects Post-Bariatric Surgery:** Denosumab treatment post-bariatric surgery preserved bone mass and improved bone microarchitecture, demonstrating significant benefits for postmenopausal women after Roux-en-Y gastric bypass or sleeve gastrectomy
- **Postoperative Hypoparathyroidism (PO-hypoPT) in Thyroid Cancer:** Thyroid cancer patients with postoperative hypoparathyroidism face increased risks of nephrolithiasis, renal insufficiency, and major adverse cardiac events (MACE), highlighting the need for close monitoring



Key Topics From Notable Presentations (6/7)



- **Metabolic & Cardiovascular Disorders:** Sessions will highlight that despite improvements in lipid management therapies like CETP inhibitors and dual receptor agonists, cardiovascular risk due to high LDL cholesterol remains a major health burden in Latin America and the Caribbean, highlighting the need for targeted public health interventions
- Trends in Cardiovascular Disease Attributable to LDL Cholesterol in Latin America and the Caribbean (1990-2021): The burden of cardiovascular disease due to high LDL cholesterol significantly increased from 1990 to 2021, with Tropical Latin America showing the most improvement in age-standardized rates. Honduras and the Dominican Republic had the highest increases in deaths, DALYs, and YLDs
- CETP Inhibitors: Anacetrapib and Obicetrapib in Dyslipidemia: Both Anacetrapib and Obicetrapib significantly reduced LDL cholesterol and ApoB, with Obicetrapib showing greater HDL elevation. Anacetrapib was more effective in reducing triglycerides. Both therapies showed promise in improving lipid profiles
- Impact of GLP1-RA and SGLT2i on Liver Fibrosis in T2D: GLP1-RA and SGLT2i significantly reduced the risk of advanced liver fibrosis in T2D patients compared to DPP4i. These findings suggest their potential in managing liver-related complications in diabetes





Key Topics From Notable Presentations (7/7)



- **Miscellaneous & Rare Disorders:** Effective osteoporosis management requires precise imaging, careful transition between treatments, and consideration of surrogate markers like BMD% for accelerating drug development and clinical decision-making will be discussed
- **Primary Hyperparathyroidism (PHPT) Prevalence and Management:** In a cohort of 177 PHPT patients, 65% underwent parathyroidectomy, with 94% having a single adenoma. Imaging showed contrast-enhanced ultrasonography (CEUS) was most effective. Elevated preoperative calcium (2.9mmol/L) was common, with osteoporosis (35%) and kidney stones (25%) as notable comorbidities
- **Switching from Denosumab to Zoledronic Acid in Postmenopausal Osteoporosis:** In postmenopausal women, switching from denosumab to zoledronic acid resulted in moderate BMD declines at the lumbar spine and hip, but no clinical fractures were observed. Further studies are needed to confirm the long-term effects
- **SABRE Study, Using Δ BMD% as a Surrogate Endpoint for Fracture Risk:** The SABRE study showed that changes in total hip BMD ($\% \Delta$ BMD) are a reliable surrogate for fracture risk, demonstrating high concordance between BMD changes and fracture outcomes, especially in larger trials



Focus of Key Industry Sponsored Sessions at ENDO 2025 (1/3)

- **Lumos Pharma:**

- Focus Areas: Growth Hormone Deficiency (GHD) Treatment
- Presentations will focus on the Phase 3 trial design of LUM-201, a daily oral growth hormone secretagogue, in treatment-naïve children with GHD

- **Novo Nordisk:**

- Focus Areas: Turner Syndrome, Noonan Syndrome, and Weight Loss
- Discussions will cover real-world evidence of treatment patterns and costs for Turner and Noonan syndromes, as well as data on the WeGoTogether app's role in weight loss and real-world weight loss with semaglutide and tirzepatide in obesity patients.

- **Amgen:**

- Focus Areas: Osteoporosis, Thyroid Eye Disease, and Osteogenesis Imperfecta
- Amgen will present data on denosumab for glucocorticoid-induced osteoporosis in children, teprotumumab for thyroid eye disease, and results from a Phase 1 study of Romosozumab in osteogenesis imperfecta



Focus of Key Industry Sponsored Sessions at ENDO 2025 (2/3)



- **Medtronic Diabetes:**

- Focus Areas: Type 1 Diabetes and Glycemic Control
- Presentations will discuss the democratization of glycemic outcomes in Type 1 Diabetes patients using the MiniMed™ 780G system of automated insulin delivery



- **Zydu Therapeutics:**

- Focus Areas: Hepatic Steatosis and PCOS
- Results from the Evidences VII randomized controlled study will be presented, showcasing the effects of saroglitazar on hepatic steatosis and liver enzymes in women with PCOS and MASLD.



- **Lundbeck A/S:**

- Focus Areas: HPA Axis Dynamics
- Sessions will explore the dynamics of the hypothalamic-pituitary-adrenal (HPA) axis during chronic corticosterone exposure and its implications for stress and metabolic disorders.



Focus of Key Industry Sponsored Sessions at ENDO 2025 (3/3)



• **Neurocrine Biosciences:**

- Focus Areas: Crinecerfont and Congenital Adrenal Hyperplasia
- Neurocrine will present data on potential drug-drug interactions with crinecerfont and treatment patterns in patients with classic congenital adrenal hyperplasia using CAHtalog™ registry data.



• **Xeris Pharmaceuticals:**

- Focus Areas: Adrenal Disorders
- Xeris will discuss the use of levoketoconazole before adrenalectomy for adrenal conditions, focusing on its safety and efficacy.



• **Novo Nordisk :**

- Focus Areas: Sogroya (somapacitan-beco)
- Novo Nordisk Healthcare will provide insights into real-world patient experiences with Sogroya (somapacitan-beco) and long-term clinical data supporting its use in growth hormone deficiency



Notable Presentations And Late-breaking Sessions At ENDO 2025

Notable Presentations At ENDO 2025

Endocrine Disorders & Pituitary Disease (1/9)



Date	Title	Author	Summary
12 July 2025	Sleep Quality, Depression and Anxiety in Patients with Hypopituitarism- An International Survey Study [Board No. SAT-040]	Andi Nikaj	• Introduction: Pituitary dysfunction can severely impact sleep, mental health, and fatigue, reducing quality of life. However, comprehensive studies across various subtypes of pituitary dysfunction remain scarce • Methodology: A cross-sectional, web-based survey assessed sleep quality, mental health, and fatigue in adults with different pituitary dysfunctions, including APD, AVP-D, PanHypo, and clinical controls. Scales such as PSQI, PHQ-9, and FSS were used for evaluation, adjusting for demographic factor • Results: Of 451 participants, the median age was 52, with 80% females. All subgroups showed significant sleep disturbances, anxiety, and fatigue. Insomnia levels varied across groups • Conclusions: The study reveals high prevalence of sleep, anxiety, and fatigue issues in pituitary dysfunction, emphasizing the need for targeted diagnostic and therapeutic interventions
12 July 2025	Prevalence and Clinical Presentation of Multiple Endocrine Neoplasia (MEN-1) in Aotearoa New Zealand; a FERNZ Registry Study [Board No. SAT-041]	Anjana Niyagama	• Introduction: The study aimed to assess MEN1 prevalence in NZ and gather information on its presentation, surveillance, and management • Methodology: Patients were identified by primary endocrinologists and invited to participate. Data collected included demographics and MEN1-related conditions • Results: 50 patients from 8 regions were identified; 42 consented, with 31 undergoing genetic analysis revealing 13 variants. The cohort had a median age of 46 years, with Māori patients comprising 26%. Hyperparathyroidism was diagnosed in 38, with 24 undergoing parathyroidectomy. 23 patients had PNETs, and other tumors included pituitary adenomas and adrenocortical carcinoma. Over 95% of patients had regular specialist surveillance, with follow-up schedules varying by individual need • Conclusions: The MEN1 prevalence aligns with global estimates. Enhancing registry participation will provide a deeper understanding of MEN1's clinical variability and improve management in NZ, supporting clinical care and future research on genetic factors and disease outcomes



Notable Presentations At ENDO 2025

Endocrine Disorders & Pituitary Disease (2/9)



Date	Title	Author	Summary
12 July 2025	<u>Prevalence And Predictors Of Pituitary Dysfunction Following Traumatic Brain Injury Due To Road Traffic Accidents In Adult Male Population: A Prospective Study [Board No. SAT-042]</u>	Charmi Gandhi	• Introduction: This study evaluates pituitary dysfunction prevalence, types, trends, and predictors, and tracks changes in body composition in male TBI survivors from road traffic accidents. • Methodology: A 6-month prospective study with 70 male TBI patients. Pituitary hormone assessment, copeptin, anti-GFAP antibodies, and BMD-DXA were done within 5 days post-trauma, with follow-up assessments at 6 months • Results: In the acute phase, 83% showed pituitary dysfunction, mainly low testosterone. At follow-up, 75% had dysfunction, mostly isolated deficits, with GHD in 57%. Radiological findings, including basal cistern obliteration and basal skull fractures, predicted dysfunction. Copeptin and anti-GFAP antibodies were not predictive. Elevated LH was linked to mortality. Body composition showed improved physical strength with increased appendicular lean mass • Conclusions: Pituitary dysfunction was common in TBI survivors, with recovery in some axes. Radiological findings were strong predictors, and LH may serve as a mortality biomarker. IGF-1 in GHD needs dynamic testing
12 July 2025	<u>Prevalence of Sexual Dysfunction in Patients with Pituitary Disease: Insights from the International DREAMS Survey Study [Board No. SAT-066]</u>	Svenja Leibnitz	• Introduction: This survey aimed to assess the prevalence and severity of sexual dysfunction in pituitary patients • Methodology: A cross-sectional, web-based survey assessed sexual well-being in adult patients with pituitary dysfunction. Participants were categorized into four groups: isolated anterior pituitary dysfunction (APD), isolated posterior pituitary dysfunction (AVP-D), combined anterior and posterior pituitary dysfunction (PHP), and those with non-hormonal pituitary conditions. Sexual desire and behavior were assessed using standardized tools • Results: 326 patients participated, with a median age of 51 and a median duration of pituitary dysfunction of 8 years. Sexual dysfunction was highly prevalent across all subgroups, particularly in those with PHP. Sexual dysfunction correlated with sex, hormonal deficiencies, and comorbidities. The average sexual desire score was significantly lower than in healthy populations • Conclusions: Sexual dysfunction is prevalent in patients with pituitary dysfunction, including those with isolated AVP-D. These findings underline the need for routine clinical assessments and targeted treatment strategies for sexual dysfunction in this population. Further research is needed to explore underlying mechanisms and effective interventions

Notable Presentations At ENDO 2025

Endocrine Disorders & Pituitary Disease (3/9)



Date	Title	Author	Summary
12 July 2025	<u>Comparative Analysis of Prolactinoma Presentation and Treatment in Hispanic and Non-Hispanic Patients: A Single-Center Retrospective Study [Board No. SAT-084]</u>	Beverly Hu	• Introduction: This study aims to explore differences in disease presentation, treatment patterns, and management in Hispanic versus Non-Hispanic patients with prolactinomas at a South Texas tertiary referral center • Methodology: A retrospective review was conducted on patients diagnosed with hyperprolactinemia or prolactinoma from 2002-2024, categorized as Hispanic or Non-Hispanic/Other. The analysis compared prolactin levels, tumor sizes, treatment choices (cabergoline vs bromocriptine), and dosages • Results: The study included 59 patients, with Hispanic patients presenting with significantly lower starting prolactin levels (131.7 ng/mL vs 773.1 ng/mL) and smaller tumors (8.9 mm vs 17.4 mm). Hispanic patients were more likely to be treated with bromocriptine, while Non-Hispanic patients received cabergoline. There was no significant difference in the highest weekly dose of cabergoline between the groups • Conclusions: Hispanic patients with prolactinomas exhibited lower starting prolactin levels and tumor sizes, suggesting differences in disease presentation. The preference for bromocriptine in Hispanic patients warrants further investigation. The study highlights the need for tailored treatment approaches and further research into disparities in prolactinoma management for Hispanic patients
12 July 2025	<u>Individualized-dose Cabergoline Therapy for 310 Prolactinomas: Prospective Study on Pregnancy, Debulking, Remission and Optimal Dosing [Board No. SAT-091]</u>	Nobuhiro Miki	• Introduction: This study evaluates 24-year trends in cardiovascular mortality in hyperfunctioning pituitary conditions, with a focus on gender and racial disparities. • Methodology: A retrospective analysis was performed using CDC WONDER data (1999-2022) to examine cardiac-related mortality in individuals with pituitary hyperfunction, identifying deaths using ICD-10 codes. Demographics, urban-rural status, and region were also considered, with age-adjusted mortality rates calculated • Results: From 1999-2022, 11,309 deaths were attributed to pituitary hyperfunction, predominantly in females (59%) and Whites (91%). Cardiac-related deaths accounted for 11.8% of cases, primarily in older adults. Age-adjusted mortality rates declined from 1999-2010, but increased significantly from 2019-2022, with similar trends observed for cardiac-related mortality • Conclusions: Mortality trends related to hyperpituitarism and cardiovascular conditions have risen, especially since 2019



Notable Presentations At ENDO 2025

Endocrine Disorders & Pituitary Disease (4/9)



Date	Title	Author	Summary
12 July 2025	Cardiovascular Mortality and Hyperfunctioning Pituitary Disorders: A 24-Year Retrospective Study of Gender and Racial Disparities using CDC WONDER database [Board No. SAT-094]	Siddhant Govekar	Introduction: This study evaluates 24-year trends in cardiovascular mortality, focusing on gender and racial disparities, using data from CDC WONDER. Methodology: A retrospective analysis using CDC WONDER death certificate data (1999-2022) examined cardiac-related mortality in individuals with pituitary hyperfunction. Deaths were identified using ICD-10 codes for cardiac conditions and pituitary hyperfunction. Age-adjusted mortality rates (AAMRs) were calculated, and temporal trends were analyzed using Joinpoint regression Results: Between 1999-2022, 11,309 deaths were linked to pituitary hyperfunction, predominantly in females (59%) and Whites (91%). The highest mortality occurred in those aged 65 and older, with 11.8% of deaths related to cardiac conditions. AAMRs for hyperpituitarism-related deaths decreased from 1999 to 2010, increased from 2010 to 2019, and sharply rose from 2019 to 2022. Cardiac-related AAMRs also showed a rise after 2020 Conclusions: Mortality trends in hyperpituitarism and cardiac diseases have increased, especially after 2019. The presence of ACE2 receptors in the hypothalamus and pituitary may explain disruptions due to COVID-19. Further research into age, sex, and comorbidity factors is essential for improving prevention strategies and patient outcome
12 July 2025	Age-Related Differences in the Clinical Features and Management of Pituitary Apoplexy: Insights from a Spanish Cohort Study [Board No. SAT-099]	Betina Biagetti	Introduction: This study assessed the clinical characteristics, management, and outcomes of PA in patients from a Spanish multicenter cohort Methodology: A retrospective, multicenter study (2010-2023) included 301 PA patients from 18 hospitals. Data were analyzed for differences in demographics, clinical presentation, treatment approaches, and outcomes between patients aged <65 and ≥65 years Results: Older patients (≥65 years) had significantly more comorbidities, including diabetes, hypertension, dyslipidemia, and cardiovascular disease. Cranial nerve palsy was more frequent in older patients, but no significant differences were observed in clinical presentation or radiological findings. Treatment rates and surgical outcomes were similar across age groups. Histopathological analysis showed more necrosis in older patients Conclusions: Despite greater comorbidities and more severe symptoms, PA management and outcomes were similar between younger and older patients. Histopathological differences suggest age-related variations in tumor biology. MRI is recommended for diagnosing ischemic necrotic PA, especially in older patients, due to its superior imaging capabilities



Notable Presentations At ENDO 2025

Endocrine Disorders & Pituitary Disease (5/9)



Date	Title	Author	Summary
12 July 2025	<u>Clinical Decision Making in Non-Functioning Pituitary Adenoma (NFPA): An Australian and New Zealand (ANZ) Survey-Based Study [Board No. SAT-103]</u>	Edward Mignone	• Introduction: This study aimed to assess current practices in NFPA management across Australia and New Zealand (ANZ) to inform future clinical and research initiatives • Methodology: An anonymous online survey with 4 clinical scenarios and 23 questions was distributed to ANZ consultant endocrinologists through the Endocrine Society of Australia and New Zealand Society of Endocrinology, with ethical approval obtained • Results: A total of 75 endocrinologists (88% from Australia, 12% from New Zealand) participated. Most respondents routinely assessed pituitary hormones for incidental intrasellar microadenomas, though there was significant variability in testing for growth hormone (GH) and ACTH. Only 24% of respondents requested formal visual field testing despite normal confrontation fields, and 73% repeated MRIs at 12 months. The majority referred macroadenoma patients with visual field deficits for trans-sphenoidal surgery. Subspecialists were more likely to arrange multidisciplinary team (MDT) reviews and ensure neurosurgeons performed ≥ 20 pituitary surgeries annually • Conclusions: This study highlights significant variability in NFPA investigation and management across ANZ, especially between subspecialists and general endocrinologists. The findings underscore the need for dedicated NFPA studies and guidelines, particularly regarding hormone testing and MDT case reviews
12 July 2025	<u>Addition of Metformin Does Not Alter Metabolic Impact of Combined Oral Contraceptive Pills in Hyperandrogenic Women with Polycystic Ovary Syndrome: Findings from COMET-PCOS Trial [Board No. SAT-133]</u>	Iris Lee	• Introduction: This study aimed to evaluate the effect of levothyroxine treatment on pregnancy and neonatal outcomes in women with TSH levels between 2.5 and 4 mIU/L • Methodology: A retrospective study at a South Indian tertiary care center reviewed data from women with singleton pregnancies who delivered between January 2022 and December 2023. Women with TSH levels between 2.5-4 mIU/L were divided into treated and untreated groups, with outcomes compared to women with TSH between 0.5-2.5 mIU/L • Results: Among 854 women with TSH levels between 2.5 and 4 mIU/L, 408 received levothyroxine treatment, while 446 did not. The treatment group was older and more likely to be overweight/obese, with a significantly higher incidence of anemia. However, no significant differences were observed in preterm birth rates, cesarean section rates, or neonatal outcomes, including NICU admissions, between the groups • Conclusions: Levothyroxine treatment in pregnant women with mild TSH elevation did not show any significant differences in pregnancy or neonatal outcomes, suggesting that treatment may not be necessary for improving these outcomes in this population

Notable Presentations At ENDO 2025

Endocrine Disorders & Pituitary Disease (6/9)



Date	Title	Author	Summary
12 July 2025	Pregnancy and Neonatal Outcomes in Women with Mild TSH Elevation (2.5-4 mIU/L): A Retrospective Study from South India [Board No. SAT-136]	Neelaveni Kudugunti	• Introduction: This study aimed to assess whether levothyroxine treatment in pregnant women with TSH levels between 2.5 and 4 mIU/L affects pregnancy and neonatal outcomes • Methodology: A retrospective review was conducted on women with singleton pregnancies who delivered between January 2022 and December 2023 at a tertiary care center in South India. The study compared treated and untreated groups of women with TSH levels between 2.5-4 mIU/L, with outcomes compared to women with TSH between 0.5-2.5 mIU/L • Results: Of 854 women with TSH levels between 2.5-4 mIU/L, 408 received levothyroxine treatment, and 446 did not. The treatment group was older and had higher rates of overweight/obesity and anemia. No significant differences were found between the groups for gestational diabetes, preeclampsia, cesarean section rates, preterm birth, or neonatal outcomes such as NICU admissions • Conclusions: Levothyroxine treatment in pregnant women with mildly elevated TSH levels did not lead to significant differences in pregnancy or neonatal outcomes, suggesting that treatment may not be necessary for improving these outcomes in this population
12 July 2025	Discordance Between Clinic Practice Versus Recommended Treatment of Male Hypogonadism: Results of a Global and Multi-Lingual Content Analysis [Board No. SAT-153]	Bonnie Grant	• Introduction: Testosterone prescriptions for men have surged globally in recent decades, partly due to non-evidence-based testosterone-seeking behaviors. Many men seek treatments like testosterone prescribing without low serum levels, microdosing, or using testosterone secretagogues. Clinic websites are a major source of information on male hypogonadism, but it is unclear how well this aligns with international clinical guidelines • Methodology: Web searches were conducted across seven countries using VPNs and multiple languages (English, Hindi, Spanish, and Arabic). Websites were assessed using a coding frame based on international clinical guidelines for male hypogonadism • Results: 253 websites were analyzed, with 54.9% based in the USA. Common non-guidelines-based practices included promoting testosterone for improved energy (63.2%), using "andropause" as a diagnosis (37.6%), recommending testosterone secretagogues (17.8%), micro-dosing (11.9%), and offering testosterone to men with normal testosterone levels (9.9%) • Conclusions: This study highlights the widespread inaccuracy of publicly available information on testosterone treatment. Addressing these discrepancies could reduce inappropriate testosterone prescriptions and improve healthcare quality for men with low testosterone

Notable Presentations At ENDO 2025

Endocrine Disorders & Pituitary Disease (7/9)



Date	Title	Author	Summary
12 July 2025	Efficacy Of Gonadotropin Treatment To Induce Spermatogenesis And Fertility In Men With Congenital Or Acquired Gonadotropin Deficiency [Board No. SAT-166]	Joshua Gialouris	• Introduction: This study assesses the impact of hCG and FSH treatment on spermatogenesis and fertility in men with congenital or acquired gonadotropin deficiency • Methodology: 99 infertile men with gonadotropin deficiency were treated with urinary or recombinant hCG and FSH. Outcomes, including sperm density, partner pregnancy, and efficacy of urinary vs recombinant gonadotropins, were analyzed through Cox regression and Kaplan-Meier plot • Results: 82% of men achieved sperm counts >0 million/mL within 4 months, with 27% reaching >20 million/mL by 37 months. The major determinant of time to pregnancy was the absence of female fertility factors. Recombinant hCG led to faster achievement of lower sperm thresholds, but no significant differences were seen for pregnancy outcomes or higher sperm thresholds • Conclusions: Most men with gonadotropin deficiency will achieve sperm output and fertility within a year. The most significant factor influencing fertility was the presence of adverse female fertility factors
12 July 2025	Efficacy And Safety Of Weekly PEGylated Recombinant Human Growth Hormone (Jintrolong) In Prepubertal Children With Turner Syndrome: 3-year Results From A Multicenter, Randomized Study In China [Board No. SAT-190]	Jiajia Chen	• Introduction: This study evaluated the efficacy and safety of weekly PEGylated recombinant human growth hormone (PEG-rhGH, Jintrolong) over three years in prepubertal girls with Turner Syndrome (TS) • Methodology: A multicenter, randomized, negative-controlled phase 2 study included 177 girls with genetically confirmed TS. Participants were randomized to receive Jintrolong at 0.1 mg/kg, 0.2 mg/kg, or no treatment. After 52 weeks, all participants received Jintrolong. Primary endpoints were changes in height SDS (HT-SDS), with other growth parameters and safety monitored • Results: At Week 52, both treatment groups showed significant HT-SDS improvement over control ($p < 0.0001$), with the 0.2 mg/kg/week group outperforming the 0.1 mg/kg/week group ($p < 0.0001$). After two years of extension, sustained HT-SDS improvements were observed, especially with the higher dose. AHV peaked at Week 52, then gradually declined but remained above baseline. 84.1% underwent dose escalation • Conclusions: Weekly Jintrolong at 0.1 to 0.4 mg/kg/week showed sustained growth improvements in girls with TS, with dose escalation necessary for optimal growth velocity, and a favorable long-term safety profile



Notable Presentations At ENDO 2025

Endocrine Disorders & Pituitary Disease (8/9)



Date	Title	Author	Summary
12 July 2025	Efficacy And Safety Of Growth Hormone In Children With Idiopathic Short Stature: A Systematic Review And Meta-analysis [Board No. SAT-199]	Julia Panzan	• Introduction: This systematic review and meta-analysis aims to evaluate the effectiveness and safety of GH in treating ISS • Methodology: A systematic search of PubMed, Embase, and Cochrane identified randomized controlled trials comparing GH vs. placebo in ISS children. Outcomes included IGF-1 levels, baseline height, adverse events, and upper respiratory tract infections (URTI) • Results: Four studies with over 400 children were included. GH significantly increased IGF-1 levels in treated groups (Xiaoping 235.29 vs. 124.14 ng/mL). Adverse events were reported variably; Woo (2018) found 71.2% in the GH group vs. 60% in placebo. URTI prevalence was similar across groups, suggesting no clear link with GH use. Baseline heights were similar • Conclusions: GH therapy increased IGF-1 levels in ISS children without significantly raising adverse events or infections. However, heterogeneity and limited long-term data prevent firm conclusions, requiring further studies with longer follow-up and final height assessment
12 July 2025	Adherence To Growth Hormone Treatment In The Transition Age: A Prospective Study* [Board No. SAT-210]	Paula van Dommelen	• Introduction: Young adults with childhood-onset growth hormone deficiency (COGHD) may face metabolic risks after GH treatment withdrawal. Continuing GH therapy post-adult height is recommended for full skeletal and muscle maturation. However, adherence is suboptimal in some, especially in the transition period • Methodology: A prospective study of 51 COGHD patients aged 15-25 years receiving GH at doses of 0.003-0.07 mg/kg/day. Adherence was measured with Easypod™ over one year. Anthropometrics, cholesterol, and IGF-1 were assessed at baseline and after one year • Results: Of 41 patients analyzed, 63% had optimal adherence ($\geq 85\%$). The optimal adherence group had higher IGF-1 levels and lower cholesterol at baseline. After one year, IGF-1 increased by 1.7 SDS in optimal and 1.5 SDS in suboptimal adherers, with lower levels in suboptimal adherers • Conclusions: High suboptimal adherence was observed in patients with permanent GHD during transition, affecting IGF-1 levels. Monitoring adherence closely is critical to optimizing treatment outcomes



Notable Presentations At ENDO 2025

Endocrine Disorders & Pituitary Disease (9/9)



Date	Title	Author	Summary
12 July 2025	Long-term Safety And Efficacy Of Somapacitan In Short Children Born Small For Gestational Age: 4-year Results From A Global Phase 2 Trial [Board No. SAT-212]	Agnes Linglart	• Introduction: This study reports the long-term (208-week) results from the REAL5 phase 2 trial, investigating once-weekly somapacitan in SGA children • Methodology: A total of 62 GH-naïve, prepubertal children born SGA were randomized to receive one of three doses of somapacitan (0.16, 0.20, or 0.24 mg/kg/week) or daily GH doses (0.035 or 0.067 mg/kg/day) for 52 weeks. Following this, all children switched to somapacitan 0.24 mg/kg/week during an ongoing safety extension phase. Height velocity, height SDS, and safety were assessed over 208 weeks • Results: After 52 weeks, somapacitan 0.24 mg/kg/week and daily GH 0.067 mg/kg/day demonstrated similar efficacy. After 208 weeks, all treatment groups showed continuous increases in height SDS. Somapacitan 0.24 mg/kg/week maintained safety and tolerability profiles similar to daily GH, with mostly mild/moderate adverse events. No neutralizing anti-drug antibodies were detected. Of patients switching from daily GH, 87% preferred somapacitan, with 80% indicating better adherence to the once-weekly regimen • Conclusions: The study supports the long-term efficacy, safety, and tolerability of once-weekly somapacitan for treating short stature in children born SGA, with a clear preference for the once-weekly treatment regimen

Notable Presentations At ENDO 2025

Congenital & Adrenal Disorders (1/4)



Date	Title	Author	Summary
12 July 2025	<u>Crinicerfont Allows for More Physiologic Glucocorticoid Treatment With Reduction of Androstenedione to a Normal Range in Pediatric Patients With Classic Congenital Adrenal Hyperplasia: Post Hoc Analysis of the CAHtalyst™ Pediatric Study [Board No. SAT-418]</u>	Maya Lodish	• Introduction: To analyze changes in GC doses alongside A4 levels in the CAHtalyst™ Pediatric study (NCT04806451) • Methodology: Patients aged 4-17 years with CAH were randomized to receive crinicerfont (25, 50, or 100 mg BID based on weight) or placebo for 28 weeks. GC doses were kept stable for 4 weeks, then reduced to a target dose of 8-10 mg/m²/day if possible, while maintaining or improving A4 levels. Achievement of a daily GC dose ≤11 mg/m²/day (physiologic range) with maintained or improved A4 was assessed at Week 28 • Results: At Week 28, 30% of crinicerfont-treated participants achieved a physiologic GC dose while maintaining or improving A4, compared to 0% in the placebo group (P=0.0009). Post hoc analysis showed 36% of crinicerfont-treated participants achieved a physiologic GC dose; 50% of these had normal A4 levels, while no placebo-treated participants achieved a physiologic dose and 68% had elevated A4 • Conclusions: The CAHtalyst Pediatric study demonstrates that crinicerfont enables achieving physiologic GC doses while maintaining or improving A4 levels in a significant proportion of pediatric CAH patients. This highlights crinicerfont's potential to reduce androgen excess and lower GC doses, addressing key treatment goals in CAH
12 July 2025	<u>Crinicerfont Enables Reduction of Glucocorticoid Doses While Maintaining or Improving Androstenedione in Pediatric Patients with Classic Congenital Adrenal Hyperplasia: Subgroup Analyses From the Phase 3 CAHtalyst™ Pediatric Study [Board No. SAT-442]</u>	Oksana Lekarev	• Introduction: To analyze changes in GC doses alongside A4 levels in the CAHtalyst™ Pediatric study (NCT04806451) • Methodology: Patients aged 4-17 years with CAH were randomized to receive crinicerfont (25, 50, or 100 mg BID) or placebo for 28 weeks. GC doses were kept stable for 4 weeks, then reduced to a target dose of 8-10 mg/m²/day if possible, while maintaining or improving A4 levels. Achievement of a daily GC dose ≤11 mg/m²/day with maintained or improved A4 was assessed at Week 28 • Results: At Week 28, 30% of crinicerfont-treated participants achieved a physiologic GC dose while maintaining or improving A4, compared to 0% in the placebo group (P=0.0009). Post hoc analysis showed 36% of crinicerfont-treated participants achieved a physiologic GC dose, 50% with normal A4, while 68% of placebo-treated had elevated A4 • Conclusions: The CAHtalyst Pediatric study demonstrates that crinicerfont enables achieving physiologic GC doses while maintaining or improving A4 levels, addressing key CAH treatment goals



Notable Presentations At ENDO 2025

Congenital & Adrenal Disorders (2/4)



Date	Title	Author	Summary
12 July 2025	Visual Hallucination, an Unusual Presentation in Immunotherapy Induced Adrenal Insufficiency - A Case Study [Board No. SAT-454]	Ummul Zakia	• Introduction: Adrenal insufficiency (AI) is a common endocrine toxicity from immune checkpoint inhibitors, leading to primary, secondary, or mixed AI. Secondary AI is often caused by immune-related hypophysitis, affecting ACTH production • Clinical Case: A 60-year-old male with lung adenocarcinoma, treated with carboplatin, pemetrexed, and pembrolizumab, developed nausea, vomiting, weight loss, diarrhea, and dizziness. Lab results showed hyponatremia and low bicarbonate. Low cortisol and ACTH confirmed secondary adrenal insufficiency induced by pembrolizumab. Hydrocortisone treatment improved symptoms • Conclusions: Pembrolizumab can cause secondary adrenal insufficiency. Timely diagnosis and steroid therapy are crucial. Regular monitoring for endocrine adverse events is recommended in immunotherapy patients
12 July 2025	A Phase 2, Open-Label Trial Evaluating the Efficacy and Safety of Anti-ACTH Antibody Lu AG13909 in Adults With Classic Congenital Adrenal Hyperplasia: Trial Design [Board No. SAT-455]	Umasuthan Srirangalingam	• Introduction: Classic congenital adrenal hyperplasia (CAH) due to 21-hydroxylase deficiency results in hyperandrogenemia from impaired cortisol biosynthesis. Supraphysiologic glucocorticoid (GC) dosing, often used to manage this, can lead to long-term health issues. Lu AG13909, a novel anti-ACTH monoclonal antibody, reduces ACTH signaling. A phase 1 trial showed it lowers 17-hydroxyprogesterone (17-OHP) and androstenedione (A4), and this phase 2 trial will evaluate its efficacy and safety in adults with CAH • Methodology: The open-label phase 1 trial was amended to include a phase 2 component. Adults aged 18-70 with classic CAH on stable GC doses were randomized into two cohorts: cohort C1 (hyperandrogenemia) and cohort C2 (normal A4 but on supraphysiologic GC). Period 1 maintained GC dosing, and Period 2 involved down-titration of the GC dose. The primary endpoint was morning A4 concentrations • Results: The trial will assess the efficacy and safety of Lu AG13909 in reducing androgen levels and GC doses in adults with classic CAH. Participants with normalized A4 levels will enter Period 2 for further GC dose reduction • Conclusions: This trial aims to confirm Lu AG13909 as a novel treatment to reduce androgen excess and GC dosing in CAH patients, offering a potential new therapeutic option



Notable Presentations At ENDO 2025

Congenital & Adrenal Disorders (3/4)



Date	Title	Author	Summary
12 July 2025	Factors Associated With a Future Diagnosis of Adrenal Adenoma: a Case-Control Population Study [Board No. SAT-468]	Ashley Han	• Introduction: This study aimed to identify both modifiable and non-modifiable risk factors associated with adrenal adenoma development • Methodology: A case-control study was conducted, pairing patients diagnosed with adrenal adenomas (2005-2017) with age- and sex-matched controls. The prevalence of social and metabolic risk factors from 10 years prior to the diagnosis was compared between groups • Results: The study identified 670 patients with adrenal adenomas. Compared to controls, patients had higher body mass index (BMI), lower socioeconomic status (SES), more tobacco use, and a higher prevalence of diabetes. Multivariable analysis showed increased BMI (OR 1.18) and tobacco use (OR 1.41) were associated with higher odds of adrenal adenoma diagnosis • Conclusions: Patients with adrenal adenomas were more likely to be obese, have lower SES, use tobacco, and show impaired glucose metabolism prior to diagnosis. Increased BMI and tobacco use were particularly linked to higher odds of adrenal adenoma. Further exploration of these factors may help identify modifiable risk factors for adrenal adenomas
12 July 2025	Comparison Of Sleep Disturbances In Patients With Mild Autonomous Cortisol Secretion (MACS) And Referent Subjects: A Cross-sectional Study [Board No. SAT-480]	Shubhangi Sharma Sharma	• Introduction: This study aimed to characterize sleep abnormalities and identify factors associated with impaired sleep in MACS patients and compare sleep abnormalities in MACS patients and referent subjects • Methodology: A cross-sectional study was conducted on 167 adults with MACS and 89 referent subjects, assessing sleep quality with the Pittsburgh Sleep Quality Index (PSQI) and quality of life using the Short Form-36 (SF-36) • Results: MACS patients had worse sleep quality (median PSQI 11 vs. 5, $P < 0.001$) and higher BMI (32 vs. 28 kg/m², $P < 0.001$). Lower PCS and MCS scores were associated with poor sleep in both groups. In MACS patients, higher clinical and biochemical severity scores correlated with worse sleep ($r = 0.20$, $P = 0.012$ and $r = 0.15$, $P = 0.050$). Multivariable analysis revealed that women, lower BMI, and higher clinical severity scores were linked to impaired sleep in MACS patients, but not obstructive sleep apnea (OSA) • Conclusions: Patients with MACS experience impaired sleep, with women, lower BMI, and higher clinical hypercortisolism severity most affected. Addressing nocturnal hypercortisolism could improve sleep quality



Notable Presentations At ENDO 2025

Congenital & Adrenal Disorders (4/4)



Date	Title	Author	Summary
12 July 2025	Cardiovascular Risk Factors In Non-Functioning Pheochromocytoma And Paraganglioma: A Cross-Sectional Study. [Board No. SAT-489]	Claudia Ramirez-Renteria	• Introduction: This study aimed to describe the frequency of cardiovascular risk factors (CVR) in patients evaluated for non-functioning Pheo and PGN at a referral center • Methodology: Medical records of adult patients evaluated for Pheo or PGN between January 2018 and March 2025 were reviewed. The frequency of traditional CVR factors and previous cardiovascular events in patients with negative hormonal tests and adequate clinical data were determined • Results: Of 534 patients, 165 met inclusion criteria (after excluding 15 from other centers, 39 with functioning tumors, and 315 without lab results). Most were women (91.5%), median age 59 years. CVR factors included hypertension (55.2%), hyperlipidemia (56.1%), previous heart disease (21.3%), prediabetes (36.4%), and diabetes (21.8%). During surgery, 31.4% had elevated blood pressure, 28.2% had hypotension, and 15.5% required blood pressure stabilization. Post-surgery, 11 patients had cerebrovascular events, with one fatality, and one had an ischemic cardiac event • Conclusions: Patients with non-functioning Pheo/PGN often have multiple CVR factors. Comprehensive preoperative assessment and treatment are vital to reduce intraoperative complications. Hormone testing should be included in the evaluation before surgery

Notable Presentations At ENDO 2025

Thyroid Disorders (1/5)



Date	Title	Author	Summary
12 July 2025	Impact of Familial Non-medullary Thyroid Cancer on Quality of Life: A Comparative Study of Affected and Unaffected Family Members [Board No. SAT-329]	Andrew Makarewicz	Introduction: This study aimed to assess whether FNMTC affects the QoL of patients and their at-risk relatives Methodology: The Thyroid Patient-Reported Outcomes (ThyPRO) questionnaire was used to assess QoL, with higher scores indicating worse symptoms. Participants completed ThyPRO during outpatient visits or electronically as part of an approved cohort study (NCT01109420). Statistical analysis included unpaired t-tests, chi-square tests, and the Mann-Whitney test Results: Seventy participants (36 affected, 34 unaffected) completed ThyPRO. No significant difference in age (53.5 vs. 46.9 years, $p=0.118$) or sex (69.4% vs. 52.9% female, $p=0.219$). Affected family members had significantly worse scores for hypothyroid symptoms ($p=0.009$), cosmetic complaints ($p=0.002$), and eye symptoms ($p=0.006$), but composite QoL scores were not significantly different ($p=0.449$) Conclusions: FNMTC is linked to worse QoL due to hypothyroid symptoms, cosmetic issues, and eye symptoms in affected individuals, while unaffected relatives' QoL is not significantly impacted. These findings may inform future screening strategies for FNMTC
12 July 2025	Predictors and Prognostic Significance of Post-operative Anti-thyroglobulin Antibody Positivity in Patients With Differentiated Thyroid Cancer: A Retrospective Cohort Study [Board No. SAT-339]	Matthew Leeder	Introduction: TgAb-positivity is linked to an increased risk of persistent/recurrent disease (PRD), but the risk factors for TgAb-positivity remain unclear Methodology: A retrospective study of 329 DTC patients aged ≥ 18 who underwent total thyroidectomy and had documented TgAb on follow-up was conducted at Kingston Health Sciences Centre. Proportional hazards and Cox models were used to assess associations between nine potential risk factors and TgAb-positivity and examine its link to PRD Results: Of 329 patients, 38.9% had at least one positive TgAb. Lymphocytic thyroiditis (LT) was the strongest predictor of TgAb-positivity ($HR=2.28$, $p<0.0001$). Other risk factors included stage >1, family history, and younger age at diagnosis. TgAb-positivity increased the risk of PRD ($HR=2.8$, $p=0.0015$), and the combination of positive TgAb and detectable Tg significantly elevated PRD risk ($HR=29.6$, $p<0.0001$). LT was linked to lower PRD risk ($HR=0.39$, $p=0.031$) Conclusions: TgAb-positivity in DTC patients is more common with longer follow-up and higher sensitivity assays. LT is the strongest predictor of TgAb-positivity, with higher cancer stage, family history, and younger age also contributing. TgAb-positivity correlates with higher PRD risk, especially when detectable Tg is present, though LT reduces this risk



Notable Presentations At ENDO 2025

Thyroid Disorders (2/5)



Date	Title	Author	Summary
12 July 2025	Scenario Changing and Efficacy of Therapeutic Plasma Exchange in the Treatment of Thyrotoxicosis [Board No. SAT-396]	Yang Zhang	• Introduction: Thyroid storm is the main indication for therapeutic plasma exchange (TPE) in thyrotoxicosis, though limited randomized trials exist for other uses. Case reports guide its use in treating thyrotoxicosis. Study aimed to summarize TPE strategies and efficacy in various thyrotoxicosis scenarios • Methodology: A literature search on PubMed, Embase, and Web of Science for case reports and series up to July 7, 2024, identified 63 studies involving 103 patients. • Results: The average age was 45.8 years, with Graves' disease being the most common cause (50.5%). Primary indications for TPE included thyroid storm (38%), contraindications to antithyroid drugs (34.3%), and refractory cases (24.8%). TPE reduced thyroid hormones and liver enzymes, with albumin more effective than plasma in reducing FT3. FT4 predicted the need for >3 sessions. Mortality was low (5.7%), primarily in thyroid storm cases, with a 12.4% adverse reaction rate • Conclusions: TPE is effective for reducing thyroid indices and liver enzymes with low mortality and adverse reactions. The main indication has shifted to contraindications to antithyroid drugs, and earlier intervention may improve outcomes
12 July 2025	TSH testing patterns for patients with type 2 diabetes and hypothyroidism after GLP-1 RA initiation in a target trial setting [Board No. SAT-405]	Naykky Singh Ospina	• Introduction: Study aimed to evaluate the timing and frequency of TSH testing within one year of starting GLP-1 RAs or SGLT-2 inhibitors in T2D patients on levothyroxine • Methodology: A cohort study using Medicare data from 2005-2020 identified T2D patients initiating GLP-1 RA or SGLT-2 inhibitors who were on stable levothyroxine doses for at least six months. TSH testing frequency was assessed one year after initiating therapy • Results: After matching, no significant demographic differences were found between the GLP-1 RA and SGLT-2 groups. The average number of TSH tests decreased after therapy initiation, with the GLP-1 RA group having slightly more tests before the index date (1.16 vs. 1.07, $p=0.001$), but fewer tests in the year after (0.93 vs. 0.89, $p=0.03$). Most patients had no TSH tests in both groups, and testing patterns showed similar test frequencies and timing for both group • Conclusions: Despite the potential impact of GLP-1 RA on levothyroxine dosing, half of the patients did not receive a TSH test after treatment initiation. There were no significant differences in TSH testing between GLP-1 RA and SGLT-2 groups



Notable Presentations At ENDO 2025

Thyroid Disorders (3/5)



Date	Title	Author	Summary
12 July 2025	Evolving Mortality Trends in Thyrotoxicosis-Related Ischemic Heart Disease Before and During the COVID-19 Pandemic: A 24-year Retrospective Study Using CDC-WONDER dataset [Board No. SAT-415]	Vikram Jeet Singh Gill	• Introduction: Thyrotoxicosis (TT) significantly impacts cardiovascular health, especially ischemic heart disease (IHD). The COVID-19 pandemic may have influenced mortality trends in patients with concurrent TT and IHD. This study analyzes these trends before and during the pandemic using CDC WONDER data • Methodology: Retrospective analysis of mortality data from 2019 and 2020 onwards, using ICD-10 codes for TT (E05.x) and IHD (I20-I25). Mortality rates were stratified by demographics, and temporal trends were analyzed using Joinpoint regression • Results: TT-related IHD deaths increased from 0.055% (pre-2020) to 0.061% (post-2020), with a notable rise in male deaths ($p=0.031$). Age-adjusted mortality rates (AAMRs) decreased (0.0594 to 0.0529, $p=0.0106$), but younger males (65-74) saw a rise in mortality (32.3%). Racial disparities emerged, with an increase in Black deaths (11.8% to 13.6%). Urbanization trends showed decreased metro deaths and increased non-metro deaths • Conclusions: The pandemic led to shifts in TT-related IHD mortality, notably affecting younger males and those in non-metro areas. Despite a decrease in AAMRs, racial and geographical disparities remain, highlighting the need for targeted interventions
14 July 2025	Burch-Wartofsky Point Scale as a Prognostic Indicator in Thyroid Storm: A Retrospective Study [Board No. MON-371]	Tomoko Nagamine	• Introduction: Thyroid storm is a life-threatening endocrinological emergency. This study evaluates the effectiveness of severity scoring systems in predicting the prognosis of thyroid storm at diagnosis to guide early multidisciplinary intervention • Methodology: Retrospective analysis of 22 patients with thyroid storm (mean age: 50.5 ± 15.5 years), mostly with Graves' disease. Prognosis was categorized as poor (death or resuscitation) or normal. Severity scoring systems—APACHE II, SOFA, qSOFA, and BWPS—were assessed at admission • Results: The poor prognosis group had significantly higher scores across all systems ($p<0.05$ for APACHE II, SOFA, and qSOFA; $p<0.01$ for BWPS). A BWPS cutoff ≥ 95 had 100% sensitivity and 94% specificity in predicting poor prognosis • Conclusions: A BWPS score ≥ 95 is a critical threshold for identifying high-risk thyroid storm patients. Early intervention or referral to specialized care could significantly improve outcomes



Notable Presentations At ENDO 2025

Thyroid Disorders (4/5)



Date	Title	Author	Summary
14 July 2025	Comparative Efficacy of Levothyroxine Monotherapy and Levothyroxine/Liothyronine Combination Therapy for Hypothyroidism: A Systematic Review and Meta-Analysis. [Board No. MON-378]	Yaman Ayasa	• Introduction: This meta-analysis evaluates the effectiveness of LT4 monotherapy versus LT4+LT3 combination therapy in managing persistent symptoms • Methodology: A systematic literature search identified 25 studies, 8 of which met inclusion criteria. The primary outcome was quality of life (QoL), and secondary outcomes included symptom score changes and adverse events • Results: Five studies assessing QoL showed no significant difference between LT4+LT3 and LT4 (SMD 0.1185, p = 0.2813). However, LT4+LT3 significantly improved symptom scores (SMD -0.3552, p = 0.0026). Heterogeneity was moderate for symptoms and high for QoL outcomes • Conclusions: LT4+LT3 combination therapy modestly improves symptom scores but does not significantly enhance QoL compared to LT4 alone. Further research is needed to clarify its clinical role
14 July 2025	The impacts of thyroid eye disease (TED) extend beyond signs/symptoms, and patients want to discuss more with their physicians: Results from the ElevaTED survey [Board No. MON-421]	Shula Pollard	• Introduction: Thyroid Eye Disease (TED) is a chronic autoimmune disorder with well-known symptoms. However, its impact on quality of life (QoL), mental health, and daily living remains underexplored • Methodology: The ElevaTED survey, a 30-minute online questionnaire, was distributed to members of various patient advocacy groups and a national panel. It focused on QoL, daily activities, pain, sleep, depression, anxiety, work productivity, and treatment goals • Results: 204 patients completed the survey, with a mean age of 50. Of these, 93% reported symptoms, and 72% had moderate-to-severe symptoms. The most common symptoms were eye pressure/pain, red/swollen eyes, and dry eyes. The greater the symptom severity, the more negative the impact on QoL, sleep, depression, and work. Many patients felt "seriously limited" in daily activities. Over 80% feared symptom worsening • Conclusions: TED significantly affects QoL and mental health. Understanding these impacts can improve multidisciplinary care and inform treatment strategies



Notable Presentations At ENDO 2025

Thyroid Disorders (5/5)



Date	Title	Author	Summary
14 July 2025	Methimazole Dosing And Titration Patterns In Graves' Disease: A Retrospective Longitudinal Cohort Study [Board No. MON-427]	Michael Morkos	• Introduction: Study aimed to determine if initial severity of thyrotoxicosis influences methimazole dose titration to achieve and maintain euthyroid status • Methodology: A retrospective review of Graves' Disease patients at a thyroid referral center was conducted, analyzing initial methimazole doses and subsequent adjustments based on clinical thyroid status • Results: 1432 encounters from 152 patients were reviewed. Severe thyrotoxicosis required higher initial doses (10-20 mg daily) and faster tapering (25-50%). Moderate cases required 5-20 mg, and mild cases needed 2.5-8.6 mg. Differences in time between visits and methimazole dose reductions were statistically significant • Conclusions: Higher initial severity of thyrotoxicosis is associated with larger initial methimazole doses, faster tapering, and more frequent visits

Notable Presentations At ENDO 2025

Diabetes & Obesity (1/5)



Date	Title	Author	Summary
12 July 2025	<u>Impact of Polycystic Ovary Syndrome and Impaired Glucose Tolerance on Preeclampsia Incidence and Birthweight Outcomes: Insights from the Born in Bradford Study [Board No. SAT-125]</u>	Harshal Deshmukh	• Introduction: This study aimed to explore the relationship between Polycystic Ovary Syndrome (PCOS), Impaired Glucose Tolerance (IGT), preeclampsia, and birthweight outcomes in pregnant women. • Methodology: Data from the Born in Bradford (BiB) study was used, integrating maternal health records, metabolomics, pregnancy outcomes, and anthropometric data. Participants were categorized into four groups based on PCOS status and glucose tolerance. • Results: The study found higher IGT prevalence in women with PCOS. Birthweight was significantly lower in groups with PCOS and/or IGT, with the lowest birthweight observed in PCOS with IGT. Preeclampsia prevalence was highest in this group. • Conclusions: The findings highlight the need for integrated management of PCOS and IGT in pregnancy to address risks of preeclampsia and adverse birth outcomes
12 July 2025	<u>A Randomized Control Trial from Southern India Evaluating a Novel Cognitive Intervention in Reducing Fear of Hypoglycemia in Patients with Fibrocalculous Pancreatic Diabetes [Board No. SAT-580]</u>	Abhishek Pandey	• Introduction: Fear of hypoglycemia (FOH) is common in individuals with brittle diabetes, including those with Fibrocalculous Pancreatic Diabetes (FCPD). FOH can worsen hyperglycemia. Psychological interventions like Eye Movement Desensitization and Reprocessing (EMDR) may alleviate FOH. • Methodology: A prospective RCT involving 56 FCPD patients assessed FOH using the Hypoglycemia Fear Survey at baseline, 1, 3, and 6 months. The intervention group received EMDR in addition to standard care. • Results: The intervention group showed significant reductions in FOH and improved glycemic control and HbA1c at 6 months compared to the control group. • Conclusions: EMDR is an effective, long-term treatment for FOH in FCPD patients.

Notable Presentations At ENDO 2025

Diabetes & Obesity (2/5)



Date	Title	Author	Summary
12 July 2025	Trends in Mortality Due to Diabetes Mellitus and Stroke in the United States (1999-2020): A National Epidemiological Study [Board No. SAT-564]	Faizan Ahmed	• Introduction: This study aimed to analyze long-term trends in Diabetes Mellitus (DM)- and stroke-related mortality (1999-2020) in the U.S., assessing disparities across demographics, geography, and clinical factors. • Methodology: A retrospective analysis of 696,849 DM- and stroke-related deaths was conducted, calculating age-adjusted mortality rates (AAMRs) and using joinpoint regression models to estimate annual percentage changes. • Results: Mortality rates declined overall, with the steepest decreases in the Northeast and Pacific Islanders. The highest mortality rates were seen in African Americans, rural populations, and Southern states. • Conclusions: While mortality has decreased, significant disparities remain by gender, race, and geography. Focused public health efforts are necessary for targeted risk reduction and disease management.
12 July 2025	Advancements in Our Understanding of Glycemia and Diabetes in African Americans: A Scoping Review of the Jackson Heart Study [Board No. SAT-569]	Oluwatomi Asemota	• Introduction: This study examines the impact of diabetes mellitus (DM) on African Americans (AAs) through the Jackson Heart Study (JHS), focusing on cardiovascular disease (CVD) and related complications. • Methodology: A systematic review of 1152 articles on DM and its complications in AAs was conducted using databases like PubMed, following PRISMA-ScR guidelines. • Results: Key findings include new biomarkers, cardiac changes in AAs with DM, and the role of the renin-angiotensin-aldosterone system (RAAS) in disease progression. • Conclusions: The review underscores the need for culturally tailored prevention and optimized care for AAs with DM.

Notable Presentations At ENDO 2025

Diabetes & Obesity (3/5)



Date	Title	Author	Summary
13 July 2025	Efficacy and Safety of Hybrid Closed-Loop System Compared With Sensor-Augmented Pump Therapy Among Older Adults With Long-Duration Type 1 Diabetes: A Systematic Review and Meta-Analysis	Piyush Ratan	• Introduction: This study compares the efficacy and safety of hybrid closed-loop systems (HCLS) versus sensor-augmented pump (SAP) therapy in older adults with long-duration type 1 diabetes (T1D), a population underrepresented in clinical trials. • Methodology: A systematic review and meta-analysis of randomized crossover trials in individuals aged 60 or older with T1D were conducted. • Results: HCLS improved time in range (TIR) by 7.9% and reduced time above range (TAR) by 7.14%, with no significant difference in time below range. HbA1c and glucose variability improved with HCLS. • Conclusions: HCLS improves glycemic control in older adults with long-duration T1D without increasing hypoglycemia risk. Further research is needed.
14 July 2025	Exploring MRI quantification techniques for phenotypes of adiposity: data from a clinical trial of metreleptin to treat Madelung's disease [Board No. MON-721]	Anabela Dill Gomes	• Introduction: Accurate fat measurements are vital in lipodystrophy. This study adapts an in-house MRI method to quantify fat in the neck and thighs. • Methodology: MRI scans of 4 Madelung's lipomatosis patients were compared to DEXA for fat distribution before and after leptin therapy. • Results: MRI and DEXA showed similar fat reductions, with strong correlation in the neck ($r=0.79$) but not in the thigh ($r=0.92$). Bland-Altman analysis showed good agreement for neck but not for thigh fat quantification. • Conclusions: MRI combined with ROI mapping is promising for regional fat quantification, but further validation is needed.

Notable Presentations At ENDO 2025

Diabetes & Obesity (4/5)



Date	Title	Author	Summary
14 July 2025	Efficacy of Continuous Glucose Monitoring in Diabetes Management of Underserved Populations [Board No. MON-606]	Jovana Vidovic	• Introduction: This study evaluates the impact of continuous glucose monitoring (CGM) on insulin-treated type 2 diabetes (T2D) patients in underserved populations, specifically those with Medicaid or financial assistance who do not qualify for CGM coverage. • Methodology: Adults with T2D and A1c >7% who lacked CGM coverage were provided with Freestyle Libre CGMs for 6 months, with data collected at baseline, 2 weeks, 3 months, and 6 months. A control group used glucose meters. • Results: CGM use resulted in a significant A1c reduction (-1.35% at 6 months) compared to the control group (-0.83%). Time in range (TIR) increased, and glucose levels decreased. • Conclusions: CGM improves glycemic control in underserved T2D patients despite limited access to insurance coverage.
14 July 2025	The Impact of Continuous Glucose Monitor Use on Diabetes Self-Management Behaviors in Adults: A Pilot Study in an Endocrine Specialty Clinic [Board No. MON-608]	Karen St. Jean	• Introduction: This study examines the impact of continuous glucose monitoring (CGM) on diabetes self-management behavior (DMB) and clinical outcomes in insulin-treated adults with diabetes (DM). • Methodology: A pilot-randomized controlled trial (RCT) with 30 participants compared two CGM systems (Libre-professional and Libre 2) over two weeks. DMB was measured using the Diabetes Self Care Inventory-Revised scale, and additional variables such as diabetes distress, sleep quality, and exercise habits were assessed. • Results: The Libre 2 CGM users showed lower rates of hypoglycemia, reduced diabetes distress, improved exercise confidence, and higher provider satisfaction. • Conclusions: Personal CGM use decreases hypoglycemia, lowers diabetes distress, and improves diabetes self-management, supporting its role in improving clinical outcomes and aiding clinical decision-making.



Notable Presentations At ENDO 2025

Diabetes & Obesity (5/5)



Date	Title	Author	Summary
14 July 2025	Association Between Joslin Kidney Panel Biomarkers And Cardiovascular Autonomic Neuropathy : Findings From Accord Trial [Board No. MON-660]	Yaling Tang	• Introduction: Cardiovascular autonomic neuropathy (CAN) predicts rapid kidney function decline in diabetes. The Joslin Kidney Panel (JKP) includes 21 biomarkers linked to kidney failure risk in diabetes. This study aimed to assess the association between JKP biomarkers and CAN in type 2 diabetes (T2D). • Methodology: A 15% sample from the ACCORD trial was analyzed for CAN and JKP biomarkers. CAN was defined using heart rate variability indices. Biomarkers were assessed using a custom multiplex Olink® assay. • Results: Seven JKP biomarkers (KIM-1, IL-1RT1, CD27, TNFRSF10B, LRP11, EPHA2, LTBR) were associated with increased CAN prevalence, with KIM-1, CD27, and LTBR remaining significant after adjustments. • Conclusions: Certain JKP biomarkers are linked to CAN in T2D. Further research into these biomarkers may help identify novel treatments for both CAN and diabetic kidney disease.

Notable Presentations At ENDO 2025

Endocrine Cancer & Bone Health (1/3)



Date	Title	Author	Summary
12 July 2025	Real World Experience with Denosumab Discontinuation in Oncology Patients: A Study from a Tertiary Cancer Center [Board No. SAT-719]	JEEHEE YOON	• Introduction: Denosumab is used to manage metastatic bone disease in cancer patients, but concerns exist regarding the risk of skeletal-related events (SREs) and rebound phenomena after discontinuation. This study evaluates real-world risks following denosumab cessation. • Methodology: Medical records of cancer patients treated with denosumab for bone metastasis were retrospectively reviewed, assessing the incidence of SREs, osteoporotic fractures, and osteonecrosis of the jaw (ONJ). • Results: After discontinuation, SREs increased from 2.9% during treatment to 8.8%, while osteoporotic fractures were not observed. ONJ occurred in 16.2% during treatment. • Conclusions: Denosumab discontinuation increased SREs, and ONJ incidence was higher than expected, warranting preventive strategies.
12 July 2025	Denosumab After Bariatric Surgery Increases Bone Mass, Microarchitecture, and Estimated Strength in Postmenopausal Women and Older Men: A Randomized Controlled Trial [Board No. SAT-721]	Karin Wu	• Introduction: This study examines the effects of denosumab (DMAB) on appendicular bone mass, microarchitecture, and strength following bariatric surgery, compared to a placebo (PBO). • Methodology: A randomized controlled trial with 36 postmenopausal adults undergoing Roux-en-Y gastric bypass (RYGB) or sleeve gastrectomy (SG) examined bone outcomes using high-resolution peripheral quantitative computed tomography (HR-pQCT) at 1- and 19-months post-surgery. • Results: DMAB treatment led to significant improvements in bone mineral density (BMD) and cortical microarchitecture, with increased bone strength at the tibia, while the placebo group experienced bone loss. • Conclusions: DMAB preserves bone mass and microarchitecture after bariatric surgery, making it a potential option for bone protection in this population.



Notable Presentations At ENDO 2025

Endocrine Cancer & Bone Health (2/3)



Date	Title	Author	Summary
12 July 2025	Challenges in Endocrine Function Testing During Clinical Cancer Drug Trials: False Positives Due to Heterophilic Antibodies [Board No. SAT-723]	Daham Kim	• Introduction: Cancer treatments, especially immunotherapy and personalized medicine, can complicate endocrine function tests due to treatment effects on results. • Methodology: Two patients undergoing cancer treatment were assessed for abnormal endocrine test results, which were re-evaluated after removing heterophilic antibodies. • Results: In one patient, elevated PTH levels normalized after antibody removal. The other patient showed false positives for thyroid and growth hormones, linked to antibody interference. • Conclusions: Heterophilic antibodies, particularly from mouse-derived monoclonal antibodies like Oregovomab, can interfere with immunoassays, leading to inaccurate endocrine test results. Caution is needed in interpretation during cancer treatments.
12 July 2025	Risk of chronic complications in thyroid cancer patients with postoperative hypoparathyroidism: A nationwide cohort study in Korea using the common data model [Board No. SAT-750]	Seongbin Hong	• Introduction: This study evaluates the risk of complications in thyroid cancer patients with postoperative hypoparathyroidism (PO-hypoPT) compared to those with preserved parathyroid function. • Methodology: A retrospective cohort study using a nationwide database analyzed 15,592 patients with PO-hypoPT and 27,906 with preserved parathyroid function, assessing nephrolithiasis, renal insufficiency, major adverse cardiac events (MACE), and other complications. • Results: PO-hypoPT patients had a higher risk of nephrolithiasis, renal insufficiency, and MACE. • Conclusions: Thyroid cancer patients with PO-hypoPT face increased risks of renal and cardiovascular complications, requiring close monitoring.

Notable Presentations At ENDO 2025

Endocrine Cancer & Bone Health (3/3)



Date	Title	Author	Summary
14 July 2025	Exploring a Potential Link Between Romosozumab and Retinal Vein Occlusion: A Case Study [Board No. MON-801]	Merve Kurt Yaman	• Introduction: Romosozumab, an anabolic agent for severe osteoporosis, enhances bone formation but may have vascular effects, including endothelial dysfunction and vascular calcification. While cardiovascular risks were not observed in the FRAME trial, the ARCH trial reported increased myocardial infarction and stroke incidents. • Methodology: A 75-year-old woman with hypertension and macular degeneration, treated with romosozumab for osteoporosis, developed branch retinal vein occlusion (BRVO) after her first injection. • Results: The patient had elevated blood pressure and BRVO was detected during a routine ophthalmology visit. Romosozumab was discontinued due to suspected vascular complications. • Conclusions: Romosozumab may be associated with retinal vein thrombosis, requiring monitoring for retinal vascular events in high-risk patients. Further research is needed on its vascular safety profile.
14 July 2025	Efficacy of Zoledronate on Incidence of Major Osteoporotic Fractures in Postmenopausal Osteoporotic Women With and Without Diabetes [Board No. MON-813]	Somdatta Giri	• Introduction: Zoledronate is beneficial in postmenopausal osteoporosis, but its effectiveness in patients with diabetes mellitus (DM) remains unclear, particularly regarding fracture prevention, as DM patients have relatively preserved BMD but higher fracture risk. • Methodology: This prospective cohort study assessed the impact of zoledronate on major osteoporotic fractures in postmenopausal women with and without DM over 5 years. Participants received annual zoledronate, vitamin D, calcium, and fall prevention measures. • Results: Among 150 women, 8 DM patients and 7 non-DM patients had new fractures. The relative risk of fractures in DM vs non-DM groups was 1.58 (P=0.2). • Conclusions: Zoledronate is equally effective in preventing fractures in postmenopausal women with and without DM.

Notable Presentations At ENDO 2025

Metabolic & Cardiovascular Disorders (1/5)



Date	Title	Author	Summary
12 July 2025	Global Burden and Trend of Cardiovascular Disease Attributable to High LDL Cholesterol in Latin America and Caribbean from 1990-2021: An insight from the Global Burden of Disease Study 2021. [Board No. SAT-246]	Ami Bhalodia	• Introduction: Cardiovascular disease (CVD) is the leading cause of death in Latin America (LA) and the Caribbean, with high LDL cholesterol as a major contributing factor. This study analyzes trends and regional disparities in CVD burden due to high LDL cholesterol from 1990 to 2021. • Methodology: Using Global Burden of Disease 2021 data, deaths, DALYs, and YLDs attributable to high LDL cholesterol were estimated by age, sex, year, and location across LA and the Caribbean. • Results: From 1990 to 2021, deaths, DALYs, and YLDs significantly increased, with Tropical Latin America showing the most improvement in age-standardized rates. Honduras and the Dominican Republic had the highest increases. • Conclusions: The burden of CVD attributable to high LDL cholesterol has risen significantly, but successful interventions in Tropical Latin America demonstrate the impact of targeted public health measures.
12 July 2025	Comparative Efficacy of Anacetrapib and Obicetrapib: A Network Meta-Analysis of CETP Inhibitors [Board No. SAT-259]	Abdel Rahman Jaber	• Introduction: CETP inhibitors like Anacetrapib and Obicetrapib modulate lipid profiles, improving HDL and reducing LDL cholesterol. This network meta-analysis evaluates their efficacy in managing dyslipidemia, particularly their effects on LDL, HDL, triglycerides, and ApoB. • Methodology: A systematic search identified 22 eligible trials, 10 of which met the inclusion criteria. Data were analyzed using a random-effects model to estimate mean differences in lipid parameters. • Results: Both Anacetrapib and Obicetrapib significantly reduced LDL cholesterol and ApoB, with Obicetrapib showing greater HDL elevation. Anacetrapib also reduced triglycerides more effectively. • Conclusions: Anacetrapib and Obicetrapib are effective in improving lipid profiles, with distinct strengths. Further large-scale trials are needed to confirm their long-term safety and efficacy.

Notable Presentations At ENDO 2025

Metabolic & Cardiovascular Disorders (2/5)



Date	Title	Author	Summary
12 July 2025	Comparative Efficacy of Olpasiran and Zerlasiran in Reducing Lipoprotein(a) Levels: A Network Meta-Analysis of Clinical Trials [Board No. SAT-260]	Jihad Abu Zayed	• Introduction: Elevated lipoprotein(a) [Lp(a)] is a key cardiovascular risk factor, and RNA-based therapies like Olpasiran and Zerlasiran show promise in reducing Lp(a) levels. • Methodology: A network meta-analysis of four trials compared the efficacy of Olpasiran and Zerlasiran in lowering Lp(a). • Results: Both agents significantly reduced Lp(a), with Olpasiran showing slightly greater efficacy. Both therapies also reduced LDL cholesterol and ApoB, with Zerlasiran showing a more significant LDL reduction. • Conclusions: Olpasiran and Zerlasiran are effective in lowering Lp(a), with Olpasiran slightly outperforming Zerlasiran, highlighting RNA-based therapies' potential in cardiovascular risk management.
13 July 2025	GLP1-RA, SGLT2i and Risk of Advanced Fibrosis in Patients with T2D:a Target Trial Emulation [Board No. SUN-591]	Alexander Turchin	• Introduction: GLP1-RA and SGLT2i have shown benefits for patients with T2D and MASLD, but their role in preventing advanced liver disease in individuals without known liver pathology is unclear. • Methodology: A target trial emulation using a US health dataset analyzed the 5-year risk of advanced MASH in T2D patients starting second medications (GLP1-RA, SGLT2i, sulfonylureas, or DPP4i) after metformin treatment. • Results: Among 67,722 patients, GLP1-RA and SGLT2i reduced the risk of advanced liver fibrosis compared to DPP4i, with risk ratios of 0.84 and 0.88, respectively. • Conclusions: GLP1-RA and SGLT2i reduce the risk of advanced liver fibrosis in T2D patients compared to DPP4i.

Notable Presentations At ENDO 2025

Metabolic & Cardiovascular Disorders (3/5)



Date	Title	Author	Summary
13 July 2025	Impact of Malnutrition among Hospitalized Patients with Diabetic Ketoacidosis : A United States Population-Based Cohort Study [Board No. SUN-597]	Carlo Casipit	• Introduction: Malnutrition is common in diabetic patients and contributes to increased morbidity and mortality, especially in hospitalized patients with Diabetic Ketoacidosis (DKA). However, its impact in this context is underexplored. • Methodology: Using the 2018-2020 US National Inpatient Sample database, this study analyzed hospitalized DKA patients with concomitant malnutrition to assess in-hospital mortality, acute respiratory failure, and mechanical ventilation use. • Results: Among 98,372 DKA patients, 11.06% had malnutrition. Malnourished patients had higher mortality (5.65% vs. 3.1%), and were at increased risk for respiratory failure and mechanical ventilation. • Conclusions: Malnutrition in hospitalized DKA patients is linked to worse outcomes, emphasizing the need for proper nutritional assessment and care.
13 July 2025	Factors Associated with Erectile Dysfunction in Patients with Type 2 Diabetes Mellitus at a Tertiary Hospital in the Philippines: An Analytical Cross-sectional Study [Board No. SUN-599]	Fidela Anne Salvador-Badilles	• Introduction: Erectile dysfunction (ED) is common in men with Type 2 Diabetes Mellitus (T2DM) and is often associated with diabetic neuropathy. This study examines the prevalence of ED in Filipino men with T2DM. • Methodology: A cross-sectional study of 164 male T2DM patients used the IIEF-5 questionnaire to assess ED. Univariate and multivariate analyses identified associated factors. • Results: ED prevalence was 66.5%, with age and diabetic retinopathy significantly linked to ED. Alcohol intake was protective. • Conclusions: ED is common in T2DM patients, with age and retinopathy as key risk factors. Early screening for complications is recommended.

Notable Presentations At ENDO 2025

Metabolic & Cardiovascular Disorders (4/5)



Date	Title	Author	Summary
13 July 2025	Comparative Efficacy and Safety of Glucagon Receptor Agonists in Metabolic Outcomes: A Network Meta-Analysis of Randomized Controlled Trials [Board No. SUN-654]	Ayah Abu Lehia	• Introduction: Obesity and Type 2 diabetes mellitus (T2DM) are major health issues, with GLP-1 receptor agonists offering benefits in weight loss and glycemic control. Dual GLP-1/glucagon receptor agonists like retatrutide, survodutide, mazdutide, and cotadutide offer a new therapeutic approach, but comparative data are limited. • Methodology: A network meta-analysis of 15 randomized controlled trials evaluated weight change, HbA1c reduction, and treatment discontinuation due to adverse events. • Results: Retatrutide showed the greatest weight loss and HbA1c reduction, followed by survodutide. Cotadutide showed the smallest effect, with higher discontinuation rates for survodutide and retatrutide. • Conclusions: Retatrutide and survodutide are most effective but associated with higher discontinuation rates due to adverse events.
13 July 2025	Efficacy of Thiazolidinediones in the Control of Insulin Resistance in Patients with Congenital or Acquired Lipodystrophy [Board No. SUN-660]	Ana Laura Felomeno	• Introduction: Lipodystrophies cause fat loss and insulin resistance, leading to metabolic complications. TZDs like rosiglitazone may improve insulin resistance and adipose tissue redistribution. • Methodology: A systematic review and meta-analysis of trials from January 2003 to January 2025 evaluated TZDs for lipodystrophy management. • Results: Rosiglitazone increased fat and improved insulin sensitivity but worsened lipid profiles. Metformin improved lipid markers and had anti-inflammatory effects but had limited fat redistribution. • Conclusions: Both rosiglitazone and metformin improve insulin sensitivity, but their metabolic effects differ, requiring individualized treatment for lipodystrophy.



Notable Presentations At ENDO 2025

Metabolic & Cardiovascular Disorders (5/5)



Date	Title	Author	Summary
13 July 2025	Sex-Specific Cardiometabolic Benefits of Tirzepatide: A Real-World Study on ASCVD Risk Mitigation [Board No. SUN-700]	Regina Castaneda	• Introduction: Tirzepatide (TZP), a dual GLP-1 and GIP receptor agonist, lacks data on cardiovascular (CV) outcomes. This study evaluates TZP's impact on cardiometabolic parameters and ASCVD risk scores. • Methodology: A retrospective study of 831 adults prescribed TZP for 12 months assessed changes in CV parameters, lipid profiles, glucose control, and ASCVD risk scores. • Results: TZP significantly improved weight loss, blood pressure, lipid levels, glucose, and liver enzymes. However, ASCVD scores showed no significant change. Females had greater benefits in weight loss, total cholesterol, and LDL, while males had a greater reduction in diastolic blood pressure. • Conclusions: TZP improved CV and metabolic parameters, particularly in females. Larger studies are needed to confirm long-term CV effects.

Notable Presentations At ENDO 2025

Miscellaneous & Rare Disorders (1/2)



Date	Title	Author	Summary
12 July 2025	<u>The Largest Study (LATVPHPT) on Primary Hyperparathyroidism Conducted at Riga East University Hospital, Latvia: Part Two [Board No. SAT-761]</u>	Ingvars Rasa	• Introduction: Primary hyperparathyroidism (PHPT) can cause a range of symptoms, from asymptomatic to severe organ involvement. The prevalence of associated conditions varies, highlighting the need for comprehensive management. • Methodology: A retrospective study of 177 PHPT patients diagnosed between 2021 and 2024 was conducted, analyzing medical records, laboratory data, radiology, and histopathology. • Results: 65% of patients underwent parathyroidectomy, with 94% having a single adenoma. Imaging showed contrast-enhanced ultrasonography (CEUS) was most effective. Preoperative calcium was elevated (2.9mmol/L), and comorbidities included osteoporosis (35%) and kidney stones (25%). • Conclusions: PHPT is associated with high rates of skeletal complications and malignancies, requiring precise imaging and timely intervention.
12 July 2025	<u>Bone Mineral Density Changes in Postmenopausal Women Switching from 30 mg Denosumab to Intravenous Zoledronic Acid: A Prospective Observational Study [Board No. SAT-778]</u>	Dalal Ali	• Introduction: In postmenopausal women with osteoporosis, transitioning from denosumab (Dmab) to zoledronic acid (ZA) may help prevent bone loss. This study evaluates the effectiveness of switching from 30mg Dmab every 6 months to 5mg IV ZA in women at low to moderate fracture risk. • Methodology: Women previously treated with 30mg Dmab were switched to 5mg IVZA. BMD changes at key sites and alkaline phosphatase activity (ALP) were assessed at 24 months, with clinical fractures as a secondary outcome. • Results: Significant BMD declines were observed at the lumbar spine and total hip ($p < 0.001$). No clinical fractures occurred. • Conclusions: Switching to IVZA after Dmab 30mg resulted in moderate BMD declines, but no fractures were observed. Further study is needed to confirm these findings.



Notable Presentations At ENDO 2025

Miscellaneous & Rare Disorders (2/2)



Date	Title	Author	Summary
12 July 2025	Monte Carlo Resampling Validates Use of Bone Mineral Density as Surrogate to Replace Fracture in Future Randomized Trials of Osteoporosis Treatments: Results From SABRE [Board No. SAT-779]	Dennis Black	• Introduction: The SABRE study explores using total hip BMD change (ΔBMD%) as a surrogate endpoint for fracture risk reduction in osteoporosis trials. • Methodology: IPD from 11 trials (59,000 patients) were analyzed using Monte Carlo resampling to compare treatment-related ΔBMD% to the surrogate threshold effect (STE) for fracture outcomes. • Results: 92% of trial-fracture combinations showed concordance between ΔBMD%-STE comparisons and observed fracture reductions, with higher concordance at larger sample sizes ($n \geq 500$). • Conclusions: ΔBMD% is a valid surrogate for fracture outcomes, enabling smaller, cost-effective osteoporosis trials and accelerating drug development.
12 July 2025	Vitamin D in Patients with Osteoporosis: a Retrospective Study from 2020 to 2024 at the Riga East University Hospital (REUH) [Board No. SAT-790]	Ingvars Rasa	• Introduction: Osteoporosis is linked to decreased bone density, and vitamin D plays a crucial role in calcium absorption and bone health, potentially reducing fracture risk. • Methodology: A retrospective study of 505 osteoporosis patients from 2020 to 2024 analyzed the impact of vitamin D supplementation on bone health using IBM SPSS 29.0. • Results: 82.4% of patients took calcium supplements, and 89.3% took vitamin D. 18.6% of patients with fractures had vitamin D levels < 30ng/ml. Higher doses (8000IU daily) showed significant improvements in vitamin D levels. • Conclusions: Adequate vitamin D supplementation improves levels and may enhance bone health in osteoporosis patients.





Key Industry Sponsored Sessions Information

ENDO 2025 Key Industry Sponsored Sessions Information (1/3)



Date	Sponsor	Title
12 th July 2025	Lumos Pharma	<u>Phase 3 Randomized and Double-blinded Trial Design with LUM-201 vs Placebo to Evaluate the Efficacy and Safety of this Daily Oral Growth Hormone Secretagogue in Treatment-Naïve Children with Growth Hormone Deficiency (GHD) [Board No. SAT-192]</u>
12 th July 2025	Novo Nordisk	<u>Real-world Evidence Of Treatment Patterns And Costs Of Turner Syndrome And Noonan Syndrome In The United States [Board No. SAT-220]</u>
12 th July 2025	Amgen	<u>A study Of Denosumab In Children With Glucocorticoid-Induced Osteoporosis [Board No. SAT-228]</u>
12 th July 2025	Medtronic Diabetes	<u>Democratization of Glycemic Outcomes in People with Type 1 Diabetes (T1D) using the MiniMed™ 780G System of Automated Insulin Delivery (AID) [Board No. SAT-625]</u>
12 th July 2025	Zydus Therapeutics	<u>Saroglitazar Improves Hepatic Steatosis And Liver Enzymes In Women With PCOS And MASLD: Results Of Evidences VII Randomized Control Study [Board No. SAT-668]</u>
12 th July 2025	Novo Nordisk	<u>Association Between Engagement With The WeGoTogether Digital Self-support App And Weight Loss In A Real-world Setting [Board No. SAT-694]</u>
12 th July 2025	Amgen	<u>Characterizing Patients With Thyroid Eye Disease Initiating Treatment With Teprotumumab: A Retrospective Cohort Study Using Linked Academy IRIS® Registry And Komodo Claims Data [Board No. SAT-811]</u>





ENDO 2025 Key Industry Sponsored Sessions Information (2/3)

Date	Sponsor	Title
13 th July 2025	Lundbeck	<u>HPA Axis Dynamics During Chronic Corticosterone Exposure [Board No. SUN-012]</u>
13 th July 2025	Lumos Pharma	<u>Oral Growth Hormone Secretagogue (LUM-201) Pediatric Capsule Formulation Demonstrates Similar Pharmacokinetic (PK) Bioavailability and Pharmacodynamic (PD) Responses to Current Tablet Formulation [Board No. SUN-092]</u>
13 th July 2025	Neurocrine Biosciences	<u>Evaluation of Potential Drug-Drug Interactions with Crinecerfont [Board No. SUN-440]</u>
13 th July 2025	Xeris Pharmaceuticals	<u>Levoketoconazole Use Prior to Adrenalectomy [Board No. SUN-484]</u>
13 th July 2025	Amgen	<u>Results From A Phase 1, Open-label, Ascending Multiple-dose Study To Evaluate Safety, Tolerability, Pharmacokinetics, And Pharmacodynamics Of Romosozumab In Children And Adolescents With Osteogenesis Imperfecta And Phase 3 Study Rationale [Board No. SUN-718]</u>
13 th July 2025	Novo Nordisk	<u>Realizing the possibilities with Sogroya® (somapacitan-beco) 5, 10, or 15 mg: Real-world patient experiences and long-term clinical data</u>
14 th July 2025	Novo Nordisk	<u>Real-world Weight Loss Observed With Semaglutide And Tirzepatide In Patients With Overweight Or Obesity And Without Type 2 Diabetes [Board No. MON-716]</u>



ENDO 2025 Key Industry Sponsored Sessions Information (3/3)



Date	Sponsor	Title
14 th July 2025	Amgen	<u>Epidemiology And Risk Factors For Hyperglycemia And Diabetes-related Complications Among Patients With Thyroid Eye Disease (TED) In The United States [Board No. MON-419]</u>
14 th July 2025	Neurocrine Biosciences	<u>Treatment Patterns and Changes in Health States in Patients with Classic Congenital Adrenal Hyperplasia: An Analysis of Data from the CAHtalog™ Registry [Board No. MON-467]</u>







Themes from key AI / ML presentations at ENDO 2025 (1/3)

- **AI and machine learning are revolutionizing personalized healthcare by enhancing diagnostic accuracy, optimizing treatment regimens, and predicting patient outcomes, particularly in endocrinology, metabolic disorders, and related areas**
- Check out the key AI / ML themes at ENDO 2025 below:
- **Acromegaly Treatment Response Prediction:**
 - Machine learning model to predict SSA resistance in 111 acromegaly patients, achieving an AUROC of 0.896, with CatBoost outperforming other algorithms
- **Breast Cancer Risk in Thyroid Cancer Survivors:**
 - Using random forest and XGBoost, the study identified age, ethnicity, and TNM stage as key features for predicting breast cancer in thyroid cancer survivors
- **AI in Robotic Adrenal Surgery:**
 - AI integration in robotic adrenal surgery offers enhanced precision, improving recovery times and reducing costs while maintaining safety and efficiency.



Themes from key AI / ML presentations at ENDO 2025 (2/3)

- **AI-Based NAFLD and NASH Diagnosis:**
 - AI software analyzes demographic, clinical, and ultrasound data to screen for NAFLD and NASH, significantly improving diagnostic efficiency
- **FMCW Radar for WHR Measurement:**
 - FMCW radar, integrated with convolutional neural networks, provides a non-invasive, accurate measurement of the waist-to-hip ratio in children and adolescents for assessing obesity
- **Proteomic Signatures Predicting Electro-Acupuncture Response:**
 - Machine learning models identify 6 serum markers predicting electro-acupuncture responsiveness for treating obesity and insulin resistance, with an AUC of 0.937
- **AI in Diagnosing Thyroid Eye Disease (TED):**
 - AI models, such as Claude, Cohere, and GPT-4o, are evaluated for diagnosing TED with moderate accuracy, but require more diverse training for rare diseases
- **AI Chatbots for Hypothyroidism Information:**
 - AI chatbots like ChatGPT-4 outperformed others in providing accurate hypothyroidism responses, but require more training on medically relevant datasets



Themes from key AI / ML presentations at ENDO 2025 (3/3)

- **Machine Learning for Pediatric Hyperthyroidism Dosage Adjustment:**
 - XGBoost model optimizes methimazole dosage for pediatric hyperthyroidism, with an MAE of 2.05 mg, showing promise for personalized treatment
- **AI for Predicting Primary Aldosteronism (PA):**
 - EHR-based machine learning model with an AUC of 0.7 predicts primary aldosteronism in hypertensive individuals, improving PA screening and clinical decision-making
- **Improved Treatment Precision:**
 - Machine learning models are enabling more precise, data-driven treatment decisions in complex endocrine disorders, such as acromegaly and pediatric hyperthyroidism, improving patient outcomes
- **Enhanced Screening and Monitoring:**
 - AI-based tools are streamlining the diagnosis and monitoring of chronic conditions like NAFLD/NASH and primary aldosteronism, providing faster, non-invasive assessments that reduce clinician workload and improve patient care



Noteworthy AI / ML presentations at ENDO 2025

Notable Presentations At ENDO 2025

AI / ML (1/12)



Date	Title	Author	Summary
12 July 2025	Assess Biomarkers with a Machine Learning Approach to Develop a Predictive Calculator for First-generation SSA Resistance in Acromegaly	Wei Lin	• Introduction: Acromegaly, caused by GH and IGF-1 excess, often requires somatostatin analog (SSA) therapy. However, responses to SSA vary, necessitating predictive models for tailored treatment. • Methodology: A retrospective study (Jan 2010–Jul 2024) analyzed 111 acromegaly patients to develop a machine learning (ML) model predicting SSA resistance. Ten ML algorithms, including CatBoost and XGBoost, were evaluated using IGF-1 trajectories. SHAP analysis identified key predictors, and model performance was assessed through various metrics like AUROC, precision, and F1 score. • Results: The CatBoost model performed best, with an AUROC of 0.896, accuracy of 82.4%, and excellent clinical utility. Key predictors included GH levels, MRI density, and comorbidity burden. • Conclusions: The CatBoost-based calculator effectively predicts SSA therapy response, but prospective validation is required for clinical use.
12 July 2025	Identification of Demographic and Clinical Risk Factors for Breast Cancer Development in Thyroid Cancer Survivors using Machine Learning Algorithms	x	• Introduction: Thyroid cancer (TC) and breast cancer (BC) are the most common malignancies in women, with TC survivors having an increased risk of BC. This study aims to use interpretable machine learning (ML) models to identify predictive features for BC diagnosis in TC survivors. • Methodology: Using the SEER database, TC patients were classified into BC and non-BC groups. Features like age, race, and TNM stage were assessed for predictive value. Random Forest and XGBoost models identified significant features, validated through multivariable logistic regression. • Results: Increased BC risk was associated with ages 40-70, while Hispanic ethnicity and unspecified N stage were linked to reduced risk. ML models highlighted key predictors, though some were not statistically significant in the test set. • Conclusions: Age >40 increases BC risk after TC, while Hispanic ethnicity and NX stage decrease risk, providing valuable insights for post-TC surveillance strategies.

Notable Presentations At ENDO 2025

AI / ML (2/12)



Date	Title	Author	Summary
12 July 2025	Update on the Use of Robotic Surgery and Artificial Intelligence for Adrenal Tumors	Hassan Heshmati	• Introduction: Robotic surgery is revolutionizing endocrine surgery, particularly for adrenal tumor removal. This review explores the role of robotic surgery and AI in enhancing adrenal surgery outcomes. • Methodology: A systematic literature search was conducted to examine robotic surgery, AI integration, and their safety, outcomes, and cost in adrenal surgery. • Results: Adrenal tumors are common, often benign, and typically unilateral. Robotic surgery, such as the da Vinci system, offers improved dexterity and visualization. Comparative analysis showed robotic surgery resulted in shorter hospital stays, with similar blood loss and complication rates to laparoscopic methods. • Conclusions: Robotic surgery enhances precision and recovery times in adrenalectomy. Integrating AI could further improve outcomes, though high costs remain a challenge.
12 July 2025	Innovative Artificial Intelligence (AI) SXR platform use to aid diagnosis of metabolic dysfunction associated steatohepatitis (MASH) and liver fibrosis	Veronica Preda	• Introduction: Cardiometabolic complications, including hepatic diseases like NAFLD and NASH, are rising due to obesity and diabetes. Conventional diagnostic methods, including liver biopsy, are often burdensome. AI integration aims to improve diagnostic performance. • Methodology: Patients undergoing endocrine assessment for obesity and cardiometabolic disease participated. AI software (SXR® platform) analyzed demographic, clinical, transaminase, and ultrasound data to produce risk scores for screening and longitudinal monitoring. • Results: AI-based screening enables rapid, non-invasive identification of patients at risk for liver disease, reducing clinician workload and avoiding invasive testing. • Conclusions: AI platforms enhance NAFLD and NASH diagnosis, enabling tailored treatment for obesity/diabetes and liver disease, improving care delivery without additional burden.

Notable Presentations At ENDO 2025

AI / ML (3/12)



Date	Title	Author	Summary
12 July 2025	evaluating waist-to-hip ratio in Youth with FMCW radar and machine learning	Jinjoo Choi	• Introduction: Waist-to-hip ratio (WHR) is a key predictor of cardiometabolic diseases, but traditional tape-based measurements are uncomfortable and prone to errors, particularly in children and adolescents. This study explores FMCW radar as a non-invasive, accurate alternative for WHR measurement. • Methodology: 100 participants aged 7-18 were assessed using FMCW radar, and the data were processed through convolutional neural networks to estimate WHR. These measurements were compared with conventional clinician-based methods. • Results: The radar-based method showed strong agreement with traditional measurements (ICC = 0.83), achieving 82% accuracy in classifying participants into abdominal obesity risk groups. • Conclusions: FMCW radar offers a reliable, non-invasive tool for central obesity assessment, making it suitable for routine use in both clinical and non-clinical settings.
13 July 2025	Neonatal Exposure to Estrogen Impairs Intra-ovarian Ovulatory Machinery	Ji Eun Oh	• Introduction: Estrogenic endocrine-disrupting chemicals (EDCs) cause reproductive dysfunction, with neonatal exposure linked to ovarian abnormalities. The mechanisms underlying these effects, particularly ovulatory failure, remain poorly understood. • Methodology: Female neonatal rats were exposed to estradiol benzoate (EB) for 14 days via microspheres. Ovarian histology, superovulation tests at prepubertal (23 days) and adult (2 months) ages, and gene expression analysis were used to assess the impact of exposure on ovarian development and ovulation. • Results: Neonatal estradiol exposure delayed folliculogenesis and caused impaired ovulation in adulthood. NeoEE rats showed no ovulatory capacity, cystic follicles, and dysregulated gene expression of key ovulation-related genes (Edn2, Pgr, Ptgs2). • Conclusions: Neonatal exposure to estrogenic EDCs disrupts the ovarian ovulation machinery, providing insight into long-term reproductive health impairment.

Notable Presentations At ENDO 2025

AI / ML (4/12)



Date	Title	Author	Summary
13 July 2025	Development and validation of a machine learning-based model for methimazole dosage adjustment in children and adolescents with hyperthyroidism	Joon Young Kim	• Introduction: Accurate methimazole dosage is crucial for managing pediatric hyperthyroidism. Traditional methods lack objectivity, prompting the development of a machine learning model for dosage adjustment. • Methodology: A retrospective study of 120 children and adolescents (1,512 records) developed the model using linear regression, XGBoost, SVR, and FFN. Input variables included demographics, thyroid function tests, and previous dosage. Validation was performed with both internal 5-fold cross-validation and external testing using an independent dataset. • Results: XGBoost demonstrated the best performance, with a mean absolute error (MAE) of 2.05 mg in external validation. SHAP analysis identified key variables: previous dose, T3, free T4, and TSH. • Conclusions: The machine learning model offers a promising tool for precise methimazole dosage adjustment in pediatric hyperthyroidism, improving treatment accuracy and outcomes.
13 July 2025	A Machine Learning Model for Risk Stratification of Primary Aldosteronism	Kidmealem Zekarias	• Introduction: Primary aldosteronism (PA) is a common yet underdiagnosed cause of secondary hypertension. This study aimed to develop an electronic health record (EHR)-based machine learning model to predict PA in hypertensive individuals. • Methodology: A retrospective cohort study was conducted using EHR data from 1,649 patients screened for PA. The screening followed guideline-recommended assessments, and 74 potential predictor variables were extracted from the data. A logistic regression model was developed using feature selection and classification methods. • Results: The model achieved an AUC of 0.7, with key predictors including age, race, BMI, hypokalemia, and uncontrolled blood pressure. PA prevalence was higher in Black patients (20%) compared to White patients (7%). • Conclusions: This predictive model improves PA screening by identifying high-risk patients, with potential integration into clinical workflows to enhance screening accuracy and rates following further validation.

Notable Presentations At ENDO 2025

AI / ML (5/12)



Date	Title	Author	Summary
13 July 2025	Proteomic Signatures and Machine-Learning Models Predict Electro-Acupuncture Responsiveness in Overweight and Obese Individuals	Zipan Lyu	• Introduction: Electro-acupuncture (EA) is a promising treatment for obesity and insulin resistance (IR), but responses vary among individuals. This study aims to identify serum proteomic signatures that predict EA responsiveness in overweight and obese individuals. • Methodology: A randomized double-blind, sham-controlled trial was conducted with 138 adults. Serum samples were analyzed for 688 inflammatory and metabolic proteins before and after an 8-week treatment. Machine learning algorithms, including MUVR and Lasso regression, developed predictive models using baseline proteomic data. • Results: The EA group showed increased expression of MCP-4, CCL4, IL-12B, CCL25, and CXCL9. A predictive model using 6 markers (AUC = 0.937) accurately identified EA-responsive patients. • Conclusions: The proteomic signatures indicate immune and inflammatory processes as key factors in EA responsiveness, advancing personalized treatment strategies for obesity and IR. Further validation and mechanistic exploration are needed.
13 July 2025	Can AI Large Language Models Help our Hyperthyroid Patients?	Aadjot Sidhu	• Introduction: Hyperthyroidism affects 1.2% of the U.S. population, and its causes include Graves' Disease and toxic goiters. This study investigates whether AI chatbots provide accurate information about hyperthyroidism across multiple languages. • Methodology: Five chatbots (Claude, Cohere, Gemini, GPT 4o Mini, GPT 4o) were asked questions in English, Chinese, Hindi, Japanese, Korean, and Punjabi. Responses were scored manually on a 1-5 scale, and text length and accuracy were analyzed through regression and T-test. • Results: Responses in English were longer than those in other languages. No correlation between response length and accuracy was found, but a language accuracy hierarchy emerged: English and Chinese > Hindi, Korean, Japanese > Punjabi. • Conclusions: AI chatbots need further training on linguistically and medically diverse datasets to improve accuracy and clarity in all languages.

Notable Presentations At ENDO 2025

AI / ML (6/12)



Date	Title	Author	Summary
13 July 2025	Bridging AI and Endocrinology: A Comparative Analysis of Large Language Models in Diabetes Care	Charani Shenoy	• Introduction: The use of AI models like ChatGPT and Google Bard in healthcare is growing, but their performance in comparison to expert physicians remains underexplored. This study evaluates LLMs' ability to answer diabetes-related questions, compared to an endocrinologist. • Methodology: Twenty-five diabetes-related questions were posed to ChatGPT, Google Bard, and an endocrinologist. Responses were evaluated by three independent graders for thoroughness, clarity, and simplicity. Physician feedback on AI integration was also analyzed. • Results: ChatGPT scored highest for clarity, Google Bard for simplicity, and the endocrinologist for thoroughness. However, LLMs showed variability in thoroughness and limited clinical depth, while physicians prioritized clinical detail over simplicity. • Conclusions: LLMs excel in patient education and prevention but require cautious integration into clinical care. Hybrid AI models combining LLM strengths with physician decision-making should be explored for improved healthcare applications.
13 July 2025	ADCES7 Guidelines and AI Chatbots: Do They Help Our Patients?	Ethan Pan	• Introduction: With 34.2 million US adults affected by diabetes, the ADCES7 guidelines outline critical self-care behaviors for diabetes management. This study examines whether AI chatbots can fulfill these guidelines. • Methodology: Chatbots were prompted with questions based on the ADCES7 guidelines, and responses were manually scored for accuracy and adherence to the guidelines. • Results: While chatbots performed well on most ADCES7 guidelines, they underperformed in providing accurate information about insulin, insulin pumps, and GLP-1 analog medications, with an average score 1.77% lower for insulin-related queries. • Conclusions: There is a gap in chatbot responses regarding newer treatments like insulin and GLP-1 analogs. Future research should update ADCES7 guidelines and enhance AI training to bridge this gap, ensuring accurate, up-to-date information in digital health tools.

Notable Presentations At ENDO 2025

AI / ML (7/12)



Date	Title	Author	Summary
13 July 2025	Can AI Chatbots Provide Accurate Information About Thyroid Eye Disease?	Hayden Lee	• Introduction: Thyroid eye disease (TED) affects a small percentage of the population, with higher incidence in women and those with Graves' Disease. This study assesses the ability of AI models to diagnose and provide information on TED. • Methodology: AI models (Claude, Cohere, Gemini, GPT 4o Mini, GPT 4o) were asked questions in English about TED. Responses were rated manually and by AI, with accuracy scored on a scale from 1 to 5. Paired T-tests were used to analyze the difference between manual and AI scores. • Results: The Pearson's correlation coefficient ($R = 0.505$) indicates a moderate correlation between manual and AI scores. No significant differences were found among the LLMs in manual scoring, suggesting consistent performance. • Conclusions: AI models provide relatively accurate responses about TED but require further training on diverse datasets, particularly for less common diseases.
13 July 2025	Glucose and Albumin Ratio Biomarkers Improve Sepsis Mortality Prediction: An Exploratory Machine Learning Approach	Joseph Fiorica	• Introduction: Hyperglycemia and hypoalbuminemia contribute to mortality in sepsis and septic shock by impairing immune function and infection clearance. This study explores the synergistic interactions between glucose, albumin, and other biomarkers to predict mortality in these conditions. • Methodology: A Boosted Tree (BT) model analyzed the variance in mortality explained by biomarker ratios (glucose, albumin, lactate) from ICU Day 1-3 in 1137 patients with sepsis or septic shock. Generalized regression with LASSO confirmed associations, controlling for demographics and comorbidities. • Results: Key ratios for predicting mortality included Alkaline Phosphatase/Albumin (VE%=21%) and Lactate/Albumin (VE%=15%) on Day 1. Over time, Lactate/Albumin became the primary predictor on Day 2, while Lactate/Glucose dominated on Day 3. • Conclusions: These findings emphasize the dynamic relationship between glucose, albumin, and other biomarkers in sepsis. Serial monitoring and dynamic assessment of these biomarkers are critical for improving clinical outcomes in septic patients. Further research is needed to understand the mechanisms driving these relationships.

Notable Presentations At ENDO 2025

AI / ML (8/12)



Date	Title	Author	Summary
13 July 2025	Are AI Models Accurate in Assisting Hypothyroidism Patients?	Sahej Sidhu	• Introduction: Undiagnosed endocrine disorders, including hypothyroidism, affect millions in the U.S., with many cases presenting minimal symptoms. This study evaluates the accuracy of AI chatbots in providing information on hypothyroidism and assessing their response accuracy. • Methodology: Questions about hypothyroidism were asked to five AI chatbots (Claude, Cohere, Gemini, GPT 4o Mini, GPT 4o). Responses were rated on a scale from 1 to 5 for accuracy. Paired T-tests compared manual vs. AI scores, and a Pearson correlation coefficient was calculated. • Results: ChatGPT 4o outperformed Cohere, followed by Claude and Gemini. The correlation between manual and AI scores was moderate (0.417). AI models were generally overconfident, with frequent incorrect responses despite high self-scores. • Conclusions: AI chatbots, particularly ChatGPT 4o, performed better in providing accurate information but were often overconfident and inaccurate. There is a need for more accessible, affordable AI models trained on medically relevant datasets.
13 July 2025	GLP-1 and Cancer Risk: AI Chatbot Responses	Sahej Sidhu	• Introduction: The use of GLP-1 receptor agonists like Ozempic has grown rapidly, with concerns about their potential role in cancer risks, especially thyroid cancer. This study evaluates whether AI models can accurately identify cancer risks associated with GLP-1 agonists. • Methodology: Five AI models (Claude, Cohere, Gemini, ChatGPT 4o Mini, ChatGPT 4o) were asked five questions regarding GLP-1 agonists and cancer risks. Responses were scored on a scale from 1 to 5, and NMDS clustering analysis was performed to assess the variability in word count, sentence length, and accuracy. • Results: Gemini showed linear distribution with several outliers, while ChatGPT 4o Mini had consistent but varied responses. Claude demonstrated a tight cluster, indicating high consistency. The presence of outliers in Cohere and Claude suggests dataset quality variations. • Conclusions: Some chatbots, such as Gemini and ChatGPT 4o Mini, offer consistent outputs, but consistency did not correlate with accuracy. Outliers highlight the need for more robust, high-quality datasets to ensure uniform, accurate responses across AI models.

Notable Presentations At ENDO 2025

AI / ML (9/12)



Date	Title	Author	Summary
13 July 2025	Neonatal Exposure to Estrogen Impairs Intra-ovarian Ovulatory Machinery	Ji Eun Oh	• Introduction: Neonatal exposure to estrogenic endocrine-disrupting chemicals (EDCs) has been linked to ovarian abnormalities and fertility impairment. However, the mechanisms behind these effects remain unclear. This study investigates how prolonged neonatal exposure to an estrogenic EDC disrupts the intra-ovarian ovulation machinery. • Methodology: Female rat pups were treated with estradiol benzoate (EB) microspheres to release EB for two weeks. Ovarian histology was performed on days 7 and 14. Superovulation was induced at 23 days and 2 months of age, with oocytes collected for analysis. • Results: NeoEE rats exhibited delayed folliculogenesis and impaired ovulation, with numerous cystic follicles but no corpus lutea. Gene expression analysis revealed dysregulated expression of ovulation-related genes (Edn2, Pgr, Ptgs2), suggesting impaired contraction and inflammation necessary for ovulation. • Conclusions: Early-life estrogen exposure disrupts ovarian function, providing insights into how EDCs adversely affect female reproductive health. These findings highlight the long-term consequences of neonatal exposure to estrogenic chemicals on reproductive machinery.
13 July 2025	A Machine Learning Model for Risk Stratification of Primary Aldosteronism	Kidmealem Zekarias	• Introduction: Primary aldosteronism (PA) is a common but often undiagnosed cause of secondary hypertension. This study aimed to develop an electronic health record (EHR)-based machine learning model to predict PA in hypertensive patients. • Methodology: A retrospective cohort study was conducted using EHR data from 1,649 patients screened for PA between 2018 and 2023. Key predictor variables were extracted, and a logistic regression model with 13 predictors was developed to assess PA risk. • Results: 10% of patients were diagnosed with PA, with higher prevalence in Black patients (20%). The model achieved an AUC of 0.7, with key predictors including age, race, BMI, and uncontrolled blood pressure. • Conclusions: The predictive model can optimize PA screening through risk stratification, and further validation will enable integration into clinical workflows for enhanced PA screening and decision support.

Notable Presentations At ENDO 2025

AI / ML (10/12)



Date	Title	Author	Summary
14 July 2025	Predictors of In-Hospital Mortality in Type 1 Diabetes Following Acute Myocardial Infarction using machine learning: Insights from the Myocardial Ischaemia National Audit Project (MINAP)	Moosa Shaikh	• Introduction: This study aimed to identify key predictors of in-hospital mortality in individuals with type 1 diabetes following acute myocardial infarction (AMI). • Methodology: Data from 28,374 patients with type 1 diabetes were analyzed using a gradient boosting machine (GBM) to determine the relative importance (RI) of baseline variables. Top predictors were incorporated into a logistic regression model to assess their impact on mortality. Model performance was evaluated using the area under the receiver operating characteristic curve (AUC). • Results: The key predictors identified included Killip classification, LVEF category, systolic blood pressure, age, and creatinine level. Cardiogenic shock (OR 8.63) and poor LVEF (OR 3.84) were the strongest predictors of mortality. The model achieved an AUC of 80.1%. • Conclusions: Killip classification, LVEF, systolic blood pressure, age, and creatinine levels are key factors in predicting mortality for type 1 diabetes patients post-AMI, aiding in risk stratification and clinical decision-making.
14 July 2025	GLP-1 and Anesthesia: Queries to AI Chatbots	Ethan Pan	• Introduction: Around 12% of US adults have taken GLP-1 agonists, with known associations to nausea, vomiting, and delayed gastric emptying, which can be risky during anesthesia. This study evaluates whether AI models can accurately identify anesthesia-related risks associated with GLP-1 agonists. • Methodology: Five chatbots (Claude, Coral, Gemini, GPT 4o Mini, and GPT 4o) were asked five questions about GLP-1 and anesthesia risks in English, Chinese, Hindi, Japanese, Korean, and Punjabi. Responses were scored on a 1-5 scale by native speakers, with raters blinded to the chatbot. • Results: English and Chinese responses consistently scored higher, while Punjabi responses frequently received low scores (3 or below). ChatGPT 4o consistently performed best, while Coral scored the lowest and was the most variable, with some responses scoring as low as 1. • Conclusions: There is a significant disparity in the accuracy of medical information across languages. More diverse datasets in multiple languages are needed to train AI chatbots, particularly for smaller languages, to ensure accurate health information is accessible to all patients.

Notable Presentations At ENDO 2025

AI / ML (11/12)



Date	Title	Author	Summary
14 July 2025	Diagnostic Utility Of Machine Learning In Central Adrenal Insufficiency Due To Pituitary Disorders	Luciani Silveira de Carvalho	• Introduction: Central adrenal insufficiency (CAI) arises from impaired ACTH or CRH stimulation of the adrenal glands, affecting cortisol and androgen secretion. Diagnosing CAI is challenging due to nonspecific symptoms and limitations of tests like the insulin tolerance test (ITT), especially when hypoglycemia is not induced or contraindicated. • Methodology: We analyzed 420 cases from a tertiary center, including 220 with CH and 200 undergoing ITT. The CatBoost algorithm was used in three stages: Stage 1 (CH with and without ACTH deficiency), Stage 2 (expanded cohort), and Stage 3 (real-world simulation). • Results: In Stage 1, the model achieved 93.5% balanced accuracy using basal cortisol, DHEA-S ratio, and other biomarkers. Stage 2 achieved 75% accuracy in training and 83% in testing. In Stage 3, the model correctly classified 18 of 20 high-confidence cases (90% accuracy). • Conclusions: ML combined with biochemical profiling, especially DHEA-S ratio, enhances CAI diagnosis when conventional tests are impractical. Prospective validation is warranted to confirm DHEA-S ratio as a screening biomarker.
14 July 2025	The Long-Term Impact of Sedentary Lifestyles and Occupational Risks on Diabetes in High- and Low-Income Countries: Forecasting Mortality and Disability Trends Using Machine Learning	Aishwar Dixit	• Introduction: T2DM is a growing global health issue, with disparities in mortality and DALYs between high- and low-income countries. This study examines diabetes trends and forecasts mortality up to 2035. • Methodology: Data from the Global Burden of Disease (1990-2021) was analyzed for high- and low-income countries. Correlation analysis and Random Forest regression ($R^2 = 0.79$) were used to forecast future mortality trends. • Results: Diabetes deaths increased by 108%, with low-income countries showing a steeper rise. DALYs surged, with low-income regions contributing 60%. Forecasts predict stabilization in high-income countries and rising mortality in low-income regions by 2035. • Conclusions: Diabetes mortality will rise, particularly in low-income countries. Policy interventions are needed to address rising inactivity and healthcare access disparities.

Notable Presentations At ENDO 2025

AI / ML (12/12)



Date	Title	Author	Summary
14 July 2025	Unraveling the Genetic Architecture of Male Fertility: A Population-Based GWAS of Testicular Volume Using Machine Learning-Based Segmentation	Alexander Busch	• Introduction: Testicular volume serves as a reliable proxy for male fertility, but the genetic basis remains largely unexplored due to limitations in traditional measurement techniques. • Methodology: Machine learning was used to assess bi-testicular volume in 22,499 men from the UK Biobank using abdominal DIXON MRI scans. A U-Net model automated segmentation, and a genome-wide association study (GWAS) was conducted to identify genetic factors associated with testicular volume. • Results: The U-Net model achieved a Dice score of 0.87. GWAS identified 14 significant loci, including rs12271187 within the FSHB locus, highlighting the role of follicle-stimulating hormone in male fertility. • Conclusions: This study provides new insights into the genetic determinants of testicular volume, offering a foundation for further research into male fertility.
14 July 2025	Predictors of In-Hospital Mortality in Type 1 Diabetes Following Acute Myocardial Infarction using machine learning: Insights from the Myocardial Ischaemia National Audit Project (MINAP)	Moosa Shaikh	• Introduction: This study aimed to identify key predictors of in-hospital mortality in individuals with type 1 diabetes following acute myocardial infarction (AMI) using MINAP data. • Methodology: Data from 28,374 patients were analyzed using a gradient boosting machine (GBM) to determine the relative importance (RI) of baseline variables. A logistic regression model quantified their impact on mortality, and model performance was evaluated with the area under the receiver operating characteristic curve (AUC). • Results: Key predictors included Killip classification, LVEF, systolic blood pressure, age, and creatinine. Cardiogenic shock and poor LVEF were the strongest predictors. The model achieved an AUC of 80.1%. • Conclusions: Killip classification, LVEF, systolic blood pressure, age, and creatinine are crucial for mortality risk stratification in type 1 diabetes patients post-AMI, aiding clinical decision-making.



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