Renaissance School *of* Medicine
Stony Brook University

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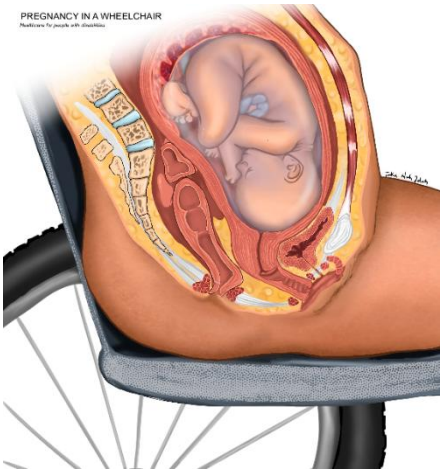
Inaugural Stony Brook Women's Health Research Conference

March 25, 2026



Conference Program

Itinerary

Morning Session- MART Auditorium and Lobby		
Time	**Title**	**Speaker(s)**
8:00–8:20	Registration	—
8:20–8:30	Welcome & Opening	Dr. Todd Griffin
8:30–10:15	Six Selected Oral Presentations*	Various presenters
10:15–10:30	Break	—
10:30–11:30	Keynote 1: Women's Health Research: Past, Present, and Future	Dr. Carolyn Mazure
Lunch Session- MART Lobby		
11:30–12:30	Poster & Art Presentations	Presenters TBD
	Collaboration Connections	—
Afternoon Session- MART Auditorium		
12:30–12:40	Afternoon Opening	Dr. William Burke
12:40–1:30	Keynote 2: Menopause: Key Opportunity for Cognitive Health	Dr. Maricedes Acosta
1:30–2:00	Five Selected Upcoming & New Presentations*	Various presenters
Late afternoon session- Fourth floor education space near the MART		
2:30–3:00	Moderated Panel: Women's Midlife Health Research	Dr. Olga Aroniadis, Dr. Helena Blumen, Dr. Raja Jaber, Dr. Brittain Mahaffey, Dr. Kathleen Scarbrough
3:00–3:45	Track-Based Small Group Discussions*	Scientific Committee members

* See presentations and track details below

Oral Presentations:

Title	Speaker	Moderator
Patient-Derived Organoids for Precision Design of PARP Inhibitor Therapies in Ovarian Cancer	Dr. Elayna Kirsch	Dr. David Garry
Provider Comfort in Evaluation and Management of Menopausal Complaints – a QI initiative	Dr. Ghazal Sinha	Dr. Noelle Mann
Mom Power Psychotherapy Clinical Trial for Mothers with Opioid Use Disorder: Brain Circuits and Behavior	Dr. James Swain	Dr. Brittain Mahaffey
Development and Initial Testing of the Stigma Scale for Endometriosis	Dr. H. Deniz Kocas	Dr. Susan Lang
Different Vascular and Genetic Risk Factors for Alzheimer's Disease in Men and Women	Ms. Lena Lin	Dr. Mehdi Damaghi
Performance of AI in Interpreting Screening Mammograms in Hispanic Population	Dr. Ryan Schaake	Dr. Brian O'Hea

Upcoming and New Presentations:

Title	Speaker	Moderator
Investigating Active Suppression of Attention to High-Calorie Food Stimuli in Individuals with Anorexic Tendencies	Ms. Yixuan Yin	Dr. Marie Sillice
Developing a Risk Calculator for Adenomyosis Based on Patient Information and Diagnostic Accuracy of Ultrasound Imaging Features	Dr. Tiffani-Amber Miller	Dr. Wei Zhu
Transauricular Vagus Nerve Stimulation (taVNS) for Delirium	Ms. Cassie Philogene	Dr. Tiffany Angelo
Visualizing and Documenting Variation in Female Perineal Anatomy	Dr. Stephanie Maiolino	Dr. Cindy Lee
GLP-1–Associated AMH Reduction and Ovulation in Obese Women with Polycystic Ovary Syndrome	Dr. Elizabeth Arruda	Dr. Olga Aroniadis

Track Based Small Group Discussions:

Track	Title	Presenters
1	Breast Health, Imaging & Surgery	Dr. Brian O'Hea, Dr. Cindy Lee
2	Women's Cancer Science	Dr. Mehdi Damaghi, Dr. Susan Lang
3	Mental & Behavioral Health	Dr. Brittain Mahaffey, Dr. Kristin Bernard
4	Equity & Social Determinants of Health	Dr. Marie Sillice, Dr. Kimberly Herrera
5	Pregnancy, Childbirth, and Postpartum	Dr. David Garry, Dr. Tiffany Angelo
6	Gyn Conditions (PCOS, Endometriosis)	Dr. Kathleen Scarbrough, Dr. Fatima Daoud
7	Preventive Women's Health	Dr. Ghazal Sinha, Dr. Lisa Benz Scott
8	Women's Heart, Metabolism & GI Health	Dr. Noelle Mann, Dr. Olga Aroniadis
9	Technology & Innovation in Women's Health	Dr. Petar Djuric, Dr. Wei Zhu

Conference Committees

Founder & Conference Chair
Dr. Heidi Preis, Department of Obstetrics & Gynecology

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Dr. Marci Lobel, Department of Psychology
Dr. Petar Djuric, Department of Electrical and Computer Engineering
Dr. Cassandra Heiselman, Department of Obstetrics & Gynecology
Dr. William Burke, Department of Obstetrics & Gynecology
Dr. Todd Griffin, Department of Obstetrics & Gynecology

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Dr. Brittain Mahaffey, Department of Psychiatry & Behavioral Health
Dr. Cindy Lee, Department of Radiology, Breast Imaging
Dr. David Garry, Department of Obstetrics & Gynecology, Maternal–Fetal Medicine
Dr. Kathleen Scarbrough, Department of Family, Population & Preventive Medicine
Dr. Lisa Diedrich, Department of Women's, Gender, and Sexuality Studies
Dr. Mehdi Damaghi, Department of Pathology
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Supported by Stony Brook Office for Research and Innovation & Department of Obstetrics, Gynecology & Reproductive Medicine

Opening Remarks

Heidi Preis, PhD
Conference Chair and Founder

Welcome to the inaugural Stony Brook Women's Health Research Conference. As a reproductive health social scientist who began at Stony Brook as a postdoctoral fellow in the Department of Psychology and later became the Director of Research in the Department of Obstetrics, Gynecology & Reproductive Medicine, I have imagined this conference for many years. With the support of my colleagues and leadership, I created this event to bring our diverse and complementary perspectives together to advance women's health with depth, rigor, and collaboration.

Women's health research seeks to understand the biological and social mechanisms that shape conditions that uniquely, disproportionately, or differently affect women across their lifespan. In a research era where funding for this work remains limited, strengthening the scientific foundation that informs women's health is more important than ever.

This meeting reflects a deliberate effort to bridge Stony Brook's East and West campuses, to build partnerships among clinicians, basic scientists, social scientists, computational scientists, trainees, and community collaborators, and to close the long-standing gaps that have limited women's health research nationally and locally.

Today's program highlights exceptional work across our university, including clinical innovation, basic science, AI, mental health, health equity, and the lived experiences of women. Bringing these voices together is essential to building the intellectual and structural connections this field requires, and I hope the conversations today spark new collaborations and future discoveries.

I offer my sincere thanks to my colleagues and leadership in Obstetrics, Gynecology, & Reproductive Medicine, to our Scientific Committee representing departments across the university, to university leadership, to the Conference Management Team, and to the Office for Research and Innovation for supporting the development of this new scholarly tradition.

Thank you for joining us as we begin a conference that reflects Stony Brook's commitment to advancing women's health through interdisciplinary collaboration, innovation, and community.

Keynote Bios

Carolyn M. Mazure, PhD, is a leading figure in women's health research and the founding Director of Women's Health Research at Yale, the university's interdisciplinary center focused on sex, gender, and health. She is the Norma Weinberg Spungen and Joan Lebson Bildner Professor Emeritus in Women's Health Research and Professor Emeritus of Psychiatry and Psychology at the Yale School of Medicine.

Dr. Mazure earned her PhD in clinical psychology from The Pennsylvania State University after completing her BA in the State University of New York system. A NIH-funded scientist, she has made major contributions to understanding depression in women, including sex- and gender-specific links among stress, mood disorders, and addiction. She is also a prolific author, with highly cited work across stress biology, gender differences in mental health, and the Yale-Brown Obsessive Compulsive Scale, which became the most cited OCD paper by 2018.

In 2023, she was appointed Chair of the White House Initiative on Women's Health Research, a national effort to transform how the United States approaches and funds women's health research. She has provided expert testimony to Congress, served on the NIH Office for Research on Women's Health Advisory Committee, and held multiple leadership roles.

Maricedes Acosta-Martinez, PhD, is an Assistant Professor in the Department of Physiology and Biophysics at the Renaissance School of Medicine at Stony Brook University. She earned her PhD from the Albert Einstein College of Medicine in 2002 and leads an NIH-funded research program focused on the neuroendocrine regulation of the hypothalamic–pituitary–gonadal axis and interactions between metabolism and reproductive physiology. Her laboratory examines how hypothalamic neurons integrate hormonal and metabolic signals to regulate puberty, fertility, and reproductive function. Her work has identified key roles for PI3K signaling in kisspeptin and GnRH neurons in controlling gonadotropin release and reproductive competence.

Dr. Acosta-Martinez has authored influential peer-reviewed publications in neuroendocrinology and reproductive biology, including highly cited studies on puberty timing, estrogen receptor signaling, and metabolic regulation of reproductive neurocircuitry. Her research uses transgenic animal models and molecular and neuroendocrine approaches to define how biological and metabolic cues shape reproductive health across the lifespan.

Oral Presentation Abstracts

Patient-Derived Organoids for Precision Design of PARP Inhibitor Therapies in Ovarian Cancer

Elayna Kirsch[1], Marilyn Day[1], Cecilia Mastrogiacomo[1], Susoma Halder[2], Karla Torres-Arciga[3], Sogol Ghanbari[2], Susan Lang[1], Gabrielle Gossner[1], William Burke[1], Mehdi Damaghi[2]

[1]Department of Obstetrics and Gynecology & Reproductive Medicine, Stony Brook University; [2]Stony Brook Cancer Center; [3]National Autonomous University of Mexico

Background: High-grade ovarian cancer (HGOC) is difficult to treat due to resistance to standard therapies. Poly-ADP Polymerase inhibitors (PARPi), which disrupt DNA damage repair, are essential to treatment; yet, resistance is increasing. Patient-derived organoids (PDOs) preserve tumor histology, genomic profiles, tumor heterogeneity, and microenvironmental signaling absent in 2D cultures, making them a highly physiologic ex-vivo model. Despite their promise, PDOs have not been used to personalize PARPi dosing or selection.

Objective: To prospectively evaluate PDOs from HGOC patients to refine adaptive PARPi therapeutic models.

Methods: Patients undergoing HGOC surgery consented to tissue collection. Fresh samples from primary tumors, ascites, and metastatic sites were collected intraoperatively, dissociated, and cultured in Matrigel-based domes with organoid media. Media was changed twice weekly and organoids were passaged as needed. PDOs were treated with Olaparib (50 μM), Niraparib (50 μM), Talazoparib (10 μM), or DMSO control. Growth was imaged every 24 hours using a CytationX microscope and analyzed with Gen5 software.

Results: Eleven patients have been enrolled to date; six were excluded due to non-HGOC pathology. Organoids were established from four primary tumors and three ascites or metastatic samples. Preliminary analysis showed steady PDO growth in control media, while Talazoparib and Niraparib reduced proliferation in two of four patients. Differential drug responses were observed between primary and matched metastatic or ascitic samples. PARPi treatment also appeared to select for distinct clonal populations, which are being collected for resistance studies.

Conclusions: PDOs offer a powerful model for assessing patient-specific PARPi responses in ovarian cancer. Our findings show variable PARPi efficacy across PDOs, highlighting tumor heterogeneity and supporting PDO-guided optimization of PARPi selection, dosing, and adaptive therapeutic strategies.

Evaluate Family Medicine Provider Comfort in Evaluation and Management of Menopausal Complaints – a Quality Improvement (QI) Initiative in Family Medicine

Ghazal Sinha, Mariam Kirvalidze

Department of Family, Population, and Preventive Medicine, Stony Brook University

Background: Despite the availability of effective hormonal and nonhormonal therapies, menopausal symptoms -vasomotor symptoms (VMS) affecting 50% to 80% and genitourinary syndrome of menopause (GSM) affecting up to 50% of postmenopausal women worldwide, remain substantially undertreated.i WHI findings negatively impacted physician comfort with hormone therapy.ii.(O): This QI project aimed to enhance primary care providers' knowledge and preparedness to manage menopausal symptoms through a structured educational intervention, in the Department of Family and Preventive Medicine, SB.

Methods: A pre-intervention survey established primary care provider confidence in managing VMS and GSM. Providers then attended a Continuing Medical Education (CME) session covering evidence-based pharmacological and non-pharmacological treatments for VMS and GSM. A post-intervention survey measured self-reported confidence in evaluation, preparedness to discuss treatment, and anticipated practice changes.

Results: The pre-survey was completed by 21 physicians and APPs, establishing baseline knowledge and confidence. Clinicians identified barriers to menopausal care as limited visit time, lack of training, and lack of clear guidelines. The post-survey was completed by 17 clinicians. A large majority of participants reported increased confidence in counseling patients about the risks and benefits of HT. High confidence was suggested in identifying treatment options for moderate–severe VMS, recognizing contraindications to systemic HT and identifying first line therapy for GSM. Providers indicated an intent to routinely screen midlife patients for menopausal symptoms and expand treatment options for symptomatic patients.

Conclusion: The intervention targeted educational barriers and increased clinician confidence. Enhanced menopause education may reduce care gaps and improve treatment of bothersome menopausal symptoms.

Mom Power Psychotherapy Clinical Trial for Mothers with Opioid Use Disorder: Brain Circuits and Behavior

Swain JE[1], Ho SS[1], Bernard K[1], Garry D[1], He X[3], Heiselman C[1], Hensley M[1], Herrera K[1], Liu Y[2], Levinson AR[1], Miller N[2], Nelson BD[1], Rosenblum KL[2], Rosenthal RN[1], Alfafara E[2], Schwartz JE[1], Amadio J[1], Eggers E[1], Livshin A[1], Manella K[2], Oates O, Reimer K[1], Saum D[1], Muzik M[2]

[1]Department of Psychiatry & Behavioral Health, Psychology and Obstetrics, Gynecology & Reproductive Medicine, Stony Brook University; [2]Department of Psychiatry, University of Michigan; [3]Department of Radiology, Hofstra University

Background: The opioid epidemic places mothers at high risk for depression, stress, and polysubstance use. Opioid use disorder (OUD) disrupts evolutionarily conserved maternal brain neurocircuits (MBN) that support caregiving, increasing risks for both parent and child. The parenting intervention Mom Power (MP) may strengthen maternal mental health by modulating key MBN regions, including the hypothalamus (HYP) and amygdala (AMY).

Methods: Before and after MP, mothers with OUD (n = 15) completed assessments of mood, post-traumatic and parenting stress, and opioid cravings plus multimodal neuroimaging, including:

a) Event-related potentials (ERP): N170 and late positive potential (LPP) responses to Crying, Laughing, and Neutral faces of unfamiliar children and to each mother's own child;

b) fMRI: activation during maternal empathic "join" versus "observe" responses to own versus unfamiliar child faces;

c) Arterial spin labeling (ASL): indices of blood–brain-barrier (BBB) integrity.

Results: Post vs. pre-MP, using paired t-tests, mothers showed reduced opioid craving ($p=0.025$), depression ($p=0.023$), post-traumatic stress ($p=0.035$), and parenting stress ($p=0.016$). fMRI revealed increased empathic-attunement responses in HYP ($p>0.001$) and AMY ($p=0.005$). ERP showed higher N170 responses to crying faces ($p=0.040$). Reductions in craving correlated with increased LPP to Laughing vs. Neutral faces ($p=0.020$), increased LPP to own vs. unfamiliar child faces ($p=0.0016$), greater AMY empathic responses on fMRI ($p>0.001$), and improved BBB integrity in HYP ($p=0.002$) and AMY ($p=0.007$).

Conclusions: MP was associated with improved mood, stress, and craving in mothers with OUD, alongside changes in MBN function and BBB integrity. Findings suggest neural mechanisms supporting parenting-focused interventions for OUD and related substance use disorders.

Development and Initial Testing of the Stigma Scale for Endometriosis

H. Deniz Koçaş[1], Lillian Polanco-Roman[2], Marci Lobel[3], Tamer Seçkin[4], Lisa R. Rubin[5]

[1]Pace University; [2]New York University; [3]Stony Brook University; [4]Lenox Hill Hospital and Hofstra/Northwell; [5]The New School for Social Research

Background: Stigma is a contributor to poor mental health in a sizeable portion of individuals with endometriosis, yet there are few dedicated measures of endometriosis-related stigma to enable assessment and intervention.

Objective: To create an appropriate scale, we adapted the Stigma Scale for Chronic Illness (SSCI) which measures experienced and self (internalized) stigma, that are especially pertinent to endometriosis.

Methods: U.S.-based adults (M age = 33.9; SD age= 7.8; 76.8% non-Hispanic White) with endometriosis (N = 410) completed an online adapted version of the SSCI, the Stigma Scale for Endometriosis (SSE), and provided information about their disease. Internal consistency and factor structure were examined with exploratory factor analyses.

Results: Analyses revealed two interpretable factors with item loadings above 0.30 from all but one item, which was removed. Participants reported moderate levels of self-stigma (11 items, α = 0.89; M = 3.31 on the 1 to 5 response scale) with good variability (SD = 0.77), and lower levels of experienced stigma (9 items, α = 0.92; M =1.94), with similar variability (SD = 0.80). Self-stigma and experienced stigma were highly correlated (r = 0.59, p < 0.001). They exhibited somewhat different patterns of association with sociodemographic and disease variables.

Conclusion: This study developed a measure of endometriosis stigma, the SSE, which reliably differentiates experienced from internalized stigma, and can be used for research and intervention promoting mental health for individuals living with endometriosis. Stigma was greater depending on specific sociodemographic and disease characteristics.

Different Vascular and Genetic Risk Factors for Alzheimer's Disease in Men and Women

Lena Lin, Xi Chen

Department of Psychology, Stony Brook University

Background: Alzheimer's disease (AD) is defined by beta-amyloid (Aβ) and tau pathology. Aβ initiates the disease and promotes tau leading to neurodegeneration. These pathologies arise from multiple factors that may differ by sex. The APOE gene, specifically the e4 variant, is associated with increased AD risks, particularly in women. Neurovascular injury, reflecting damage to cerebral blood vessels, is more common in men and can strongly influence AD progression.

Objective: To examine how APOE e4 and neurovascular injury relate to AD pathology in women and men.

Methods: We analyzed cross-sectional data from the Alzheimer's Disease Neuroimaging Initiative, including 311 participants (192 cognitively normal, 119 mild cognitive impairment; 117 men, 194 women). Aβ was measured in centiloids from FTB/FBB/NAV PET scans. Tau was measured in the meta-temporal region using FTP PET. Neurovascular injury was measured using total white matter hyperintensity (WMH) volume from MRI scans. APOE genotype was used to classify e4 carrier status. All data were acquired within one year.

Results: Sex differences were evident in factors contributing to Aβ and tau. In men who were e4 carriers, WMH burden accelerated Aβ deposition, indicating that vascular injury increased AD risks in genetically vulnerable men. In contrast, women e4 carriers had more Aβ but showed minimal influence from WMH. Similarly, tau pathology was more genetically driven in women, with women e4 carriers showing faster tau increase with increasing Aβ, independent of WMH level, whereas in men, neurovascular injury amplified Aβ effects on tau, especially in younger ages.

Conclusion: In AD, the disease emergence, as indexed by higher Aβ, and progression, as indexed by higher tau, appear to be more genetically driven in women and more neurovascularly driven in men. This may reveal sex-specific pathways that differently increase disease vulnerability, which can inform future therapeutic interventions in men and women.

Performance of AI in Interpreting Screening Mammograms in Hispanic Population

Ryan Schaake[1], Ria Jhala[1], Joshua Zhu[1], Yunyoung Kim[1], Anam Choudhry[1], Melinda Staiger[1], Wei Zhao[1], Patrick Dineen[2], Jonathan Go[3], Crystal Snyder[3], Cindy S Lee[1]

[1]Department of Radiology, Stony Brook University; [2]Stony Brook Cancer Center; [3]DeepHealth, Troy, OH

Background: Screening mammography reduces breast cancer mortality by 20–40%, but disparities in access and outcomes persist, particularly among underserved populations. While Artificial intelligence (AI) can improve detection, its performance across diverse demographics remains understudied. This study evaluates the performance of an FDA-approved AI algorithm (ProFound AI 3.0) in a predominantly Hispanic and underinsured population in Suffolk County, New York.

Methods: We retrospectively analyzed 10,558 screening mammograms from 7,952 women performed on a mobile mammography unit (MMU) serving underserved areas (9/27/2018–11/11/2025). MMU visited underserved areas within the community, to provide mammographic screening to women who had poor access to care. Radiologists interpreted all exams; AI retrospectively assigned malignancy likelihood scores (0–100). We evaluated the AI model's diagnostic performance using ROC analysis to identify optimal operating points (maximizing Youden's Index) and targets 95% sensitivity. Additionally, we assessed the influence of breast tissue density via pairwise AUC comparisons. Biopsy-proven invasive cancer and DCIS were considered positive.

Results: The cohort was 72.4% Hispanic and approximately 70% uninsured, with 37 diagnosed cancer (0.35% prevalence). At an optimal threshold of 67.5, the model demonstrated 86.5% sensitivity and 91.6% specificity (NPV 99.9%). A high-sensitivity threshold (25.5) achieved 94.6% sensitivity with 50.6% specificity. Pairwise comparisons revealed no statistically significant differences in performance across breast density categories ($p<0.05$).

Conclusion: This study demonstrates consistent AI performance in an underserved, predominantly Hispanic population screened via MMU. These findings support AI utility in settings facing disparities and suggest that population-specific scoring thresholds may be more appropriate than cutoffs (i.e. 49) previously derived from predominantly white populations.

Upcoming and New

Transauricular Vagus Nerve Stimulation (taVNS) for Delirium

Isadora Botwinick, Cassie Philogene

Department of Trauma, Emergency Surgery and Surgical Critical Care, Stony Brook

Background and rationale: Delirium is a prevalent hospital complication associated with long-term cognitive decline. Elderly women may experience greater functional loss, accelerated cognitive aging, and high risk of institutionalization and death after delirium. This pattern mirrors broader disparities in psychiatric and neurological health that disproportionately affect women of all ages such as depression and anxiety. These disorders may all share a neuroinflammatory pathophysiology. Targeting neuroinflammation directly in the dorsolateral prefrontal cortex (DLPFC), may provide a new therapeutic avenue to address these vulnerabilities in neurological and psychiatric function.

Proposed innovation: Unfortunately, there is no FDA - approved treatment for delirium. Transauricular vagus nerve stimulation (taVNS) is a noninvasive neuromodulatory approach that may reduce neuroinflammation and modulate DLPFC activity. We propose taVNS as novel therapy for delirium. This modality has never been trialed for delirium in an inpatient adult population. Thus, we will begin with a pilot study to assess feasibility of delivering taVNS to hospitalized adults with delirium before planning larger randomized controlled trials.

Next steps and needs: We are currently engaged in a pilot study of taVNS for inpatients with delirium. We are actively recruiting patients with delirium to undergo twice daily tAVNS, paired with point of care non-invasive neurophysiologic monitoring. We welcome collaboration from other clinicians who are experienced with this patient population.

Potential Impact: Delirium is unfortunately very common in hospitalized patients. Research suggests that women have disproportionately higher risk of mortality and morbidity associated with ICU delirium. A novel, noninvasive treatment modality for delirium could have a life-altering effect for elderly female patients nationwide.

Visualizing and Documenting Variation in Female Perineal Anatomy

Stephanie A. Maiolino[1], Clinton Andrew Grand Pré[1], Gabriella K. Card[2], Nathan J. Kley[1]

[1]Department of Anatomical Sciences, Renaissance School of Medicine at Stony Brook University;
[2]Interdepartmental Doctoral Program in Anthropological Sciences, Stony Brook University

Background and Rationale: Erectile tissues are critical for sexual and reproductive function in both males and females. It is well known that the body of the penis is formed by three erectile bodies (two corpora cavernosa and one corpus spongiosum), and that the clitoral body contains two corpora cavernosa. However, there is disagreement among studies and anatomical texts as to whether a female homologue of the corpus spongiosum is also present in the clitoral body.

Proposed Research: We suggest that discrepancies among findings may be related to unappreciated variability; difficulties of dissecting small, three-dimensional structures; and small sample sizes. We propose to 1) document variation in clitoral components by generating 3D models from contrast-enhanced microCT scans and 2) compile a large dataset on naturally occurring variation from a network of external collaborators using a standardized protocol.

Next Steps: Our next steps towards generating representative 3D models include altering staining protocols to better distinguish among adjacent tissues in microCT scans. We have been able to visualize erectile structures using iodine-enhanced microCT scanning (diceCT), but smaller vessels and boundaries between abutting structures are difficult to discern. Our next steps towards compiling a large, representative dataset include adding observations to our pilot sample on which to base our standardized data collection protocol. Thus far, we have collected observations on clitoral body composition from 23 body donors dissected in anatomy courses representing a wide range of variations.

Potential Impact: Our project aims to provide data necessary to reconcile contrasting anatomical descriptions of the basic anatomy of the female perineum. Results will help inform anatomical texts and teaching materials and have implications for informing surgical procedures of the female perineum and women's health.

Developing a Risk Calculator for Adenomyosis Based on Patient Information and Diagnostic Accuracy of Transvaginal Ultrasound Imaging Features

Tiffani-Amber Miller, Xun (Julie) Lian, Caitlin Waters

Department of Obstetrics, Gynecology & Reproductive Medicine, Stony Brook University

Background and rationale: Adenomyosis, which affects ~1% of U.S. women is characterized by ectopic endometrial glands and stroma within the myometrium and commonly presents with symptoms such as dysmenorrhea, dyspareunia, and chronic pelvic pain. While pre-operative imaging (e.g., transvaginal ultrasound, MRI) can suggest adenomyosis, definitive diagnosis still relies on histopathological examination after hysterectomy, which remains the gold standard. Recent meta-analysis revealed sonography sensitivity of 82.5% and specificity of 84.6%, though these values vary considerably across studies. A combination of imaging findings generally improves diagnostic accuracy. Additional, patient histories such a parity, BMI, and age, can also aid in the accuracy of the diagnosis.

Proposed innovation: We propose developing an adenomyosis risk calculator score to enhance diagnostic precision using ultrasound findings. By integrating key sonographic features with patient medical histories, the calculator can refine diagnostic criteria and guide individualized care management options. Currently, no standardized scoring system exists; this project aims to bridge that gap. An adenomyosis risk calculator will enable clinicians to counsel patients more effectively based on estimated disease severity.

Next steps and needs: The risk calculator will be developed using retrospective chart reviews of ultrasound and pathology reports. Data analysis will need to employ sophisticated machine learning algorithms to generate risk scores from sonographic findings and patient histories. Ultimately, these algorithms could be incorporated into routine ultrasound exams.

Potential impact: This initiative could significantly improve timely diagnosis by establishing a standardized approach for assessing adenomyosis. A standardized approach, will also facilitate future research on adenomyosis by enabling patient stratification based on disease severity.

Investigating Active Suppression of Attention to High-Calorie Food Stimuli in Individuals with Anorexic Tendencies

Farrah Yin, Abe Leite, Gregory J. Zelinsky

Department of Psychology, Stony Brook University

Background and rationale: Attention bias in anorexia nervosa (AN) shows contradictory patterns: some studies report avoidance of high-calorie foods, whereas others show heightened attentional capture. This inconsistency reflects a gap in understanding the underlying cognitive mechanism. Drawing on the Signal Suppression Hypothesis (Gaspelin et al. 2015), which posits that salient but distracting stimuli are actively suppressed, this project examines whether individuals with anorexic tendencies actively suppress heightened attention to high-calorie food cues and whether such suppression accounts for previously mixed findings.

Proposed innovation: Using a two-block paradigm integrating search and probe tasks, the study adapts Gaspelin et al.'s (2015) classic design to food stimuli. Block 1 replicates established suppression effects using shape and color; Block 2 replaces shapes with high- and low-calorie foods and neutral objects to test whether high-calorie items function as behaviorally salient distractors. Accuracy of letter recall on probe trials provides direct behavioral evidence of top-down inhibition. This approach is novel in its application of a mechanistic attentional-inhibition framework to AN-related cognition.

Next steps and needs: Planned analyses include ANOVA tests of probe recall accuracy across stimulus types in anorexic-tendency (ANT) versus healthy-control groups. One obstacle we face is the difficulty of recruiting and compensating patients with AN. Helpful collaborators would include clinicians specializing in eating disorders and experts in cognitive bias modification.

Potential impact: Clarifying whether high-calorie avoidance reflects active suppression can reconcile conflicting empirical findings and illuminate how cognitive mechanisms contribute to the development and maintenance of AN. The work may help identify targets for more precise interventions, including cognitive bias in eating disorders, strengthening future translational applications in women's mental health and eating disorder treatment."

GLP-1–Associated AMH Reduction and Ovulation in Obese Women with Polycystic Ovary Syndrome

Elizabeth Arruda, Avner Hershlag

Department of Obstetrics, Gynecology & Reproductive Medicine, Stony Brook University

Background and Rationale: Obesity-related polycystic ovary syndrome (PCOS) is characterized by chronic anovulation, hyperandrogenism, insulin resistance, and elevated anti-Müllerian hormone (AMH). Although weight loss is known to improve ovulatory function, the mechanisms underlying ovulation restoration remain poorly understood. In addition to serving as a marker of follicle number, emerging evidence suggests that elevated AMH may contribute to follicular arrest by impairing FSH responsiveness and altering neuroendocrine signaling.

Proposed Research: We propose a prospective pre–post study of obese women with PCOS treated with a GLP-1 receptor agonist for six months. Assessments at baseline and post-intervention will include body mass index (BMI), menstrual regularity, hirsutism, acne, antral follicle count, AMH, total and free testosterone, and dehydroepiandrosterone sulfate (DHEAS). Ovulation will be assessed biochemically using mid-luteal serum progesterone, with ovulation defined as a progesterone level ≥3 ng/mL, obtained approximately seven days after a urinary LH surge or via serial sampling in women with irregular cycles. The primary outcome will be the proportion of participants achieving progesterone-defined ovulation.

Next Steps and Needs: Secondary analyses will evaluate associations between changes in AMH and ovulatory status, adjusting for changes in BMI and androgen levels, to explore whether AMH reduction may partially mediate ovulation restoration. Collaboration with biostatistical and reproductive endocrinology partners is sought to support mechanistic and mediation analyses.

Potential Impact: This study explores a novel pathway linking metabolic intervention to ovarian function in PCOS. Demonstrating an association between AMH reduction and progesterone-confirmed ovulation could refine mechanistic understanding, support biomarker-guided treatment strategies, and inform future fertility-focused interventions in obese women with PCOS.

Distinct Poster Presentation Abstracts

Inflammatory Biomarkers Are Associated With Spatial Navigation in Older Adults

Kelly Cotton, Emmeline Ayers, Joe Verghese

Department of Neurology, Stony Brook University

Background: Spatial navigation is a complex cognitive skill that is important for daily functioning. Declines in navigation ability have been frequently noted in people with cognitive impairment, and it has been proposed as an early biomarker for Alzheimer's disease (AD). While previous research has linked inflammation to spatial navigation in animal models, the effects in humans, and specifically older adults, remains unknown. Furthermore, as nearly two-thirds of people with AD are women and spatial navigation is highly impacted in AD, understanding mechanisms that affect spatial navigation is particularly important for women's cognitive health.

Objectives: We aimed to assess the relationship between inflammatory biomarkers and spatial navigation ability.

Methods: We examined the association between levels of interleukin-6 (IL-6) and C-Reactive protein (CRP) and time taken to complete the Floor Maze Test (FMT) using multiple regression models in 206 community-dwelling older adults (M age 78.3±6.7 years, 53% female). We calculated beta coefficients with 95% confidence intervals (CI) for the overall sample, as well as stratified by sex.

Results: Performance on the immediate FMT was significantly associated with CRP, after adjusting for demographics, mobility and physical health, and episodic memory and executive function (Beta = 1.18, 95% CI: 1.04-1.35 p = 0.01). Our stratified analysis confirmed that this effect was sex-specific and present only in female participants. We did not find any significant associations with the delayed FMT, in males, or with IL-6.

Conclusion: Higher levels of CRP are associated with worse spatial navigation performance in female older adults. Though this study is cross-sectional, it highlights the effects of inflammation on an important cognitive skill, spatial navigation. The findings have important implications for targeted and sex-specific interventions to ameliorate the impact of cognitive decline.

Psychiatric Burden of Antepartum Hospitalization Quantified by the Edinburgh Postnatal Depression Scale (EDPS)

Chaitali Korgaonkar-Cherala, Samantha Gobioff, Sargam Panpaliya, Adeola Adeyeye, Dana Masand, Angelina Mozier, Blair Bell, Zenobia Gonsalves, Rachel Lee, Jaclyn DelPozzo-Richards, Kimberly Herrera, Jennifer Choi, Cassandra Heiselman

Department of Obstetrics, Gynecology & Reproductive Medicine, Stony Brook University

Background: Mental health disorders represent a significant proportion of maternal morbidity and are exacerbated with the stress of pregnancy. Inpatient admission during pregnancy has been proven to worsen and unmask mental health conditions.

Objective: Determine if antepartum admission affects mood disorders and relationship between mood, socioeconomic factors, medical comorbidities and pregnancy outcomes.

Methods: A retrospective study of patients admitted to antepartum service from Nov 2024-May 2025. Patients completed EDPS upon admission and weekly until discharge. Positive EPDS was defined as ≥10, and positive EDPS-3A anxiety subscale was ≥5. Data was collected including demographic factors, reason for admission, medical comorbidities, psychiatric diagnoses and medications, area deprivation index (ADI), driving distance from home to hospital, mode of delivery and birth weight. p <0.05.

Results: Forty-three patients completed an admission EDPS. Median EPDS scores declined over weeks among those with continued admission. Five patients (9.3%) had a positive EPDS on admission, which did not correlate to reason for admission (p=0.23). Total scores did not differ by admission reason (p=0.29), including short cervix or labor (p=0.36) and hypertension (p=0.15). The majority (80%) of patients with a positive 3A score had an overall positive EDPS score. There was a correlation between positive 3A score and pre-existing mental health diagnosis (p=0.008). The 3A score was unrelated to ADI (p=0.07), distance from hospital to home (p=0.36), primary spoken language (p=0.96), reason for admission (p=0.16) or birth weight (p=0.39).

Conclusion: A positive EDPS is correlated with positive 3A score, demonstrating that anxiety comprises a large psychiatric burden, but has little to do with factors external to the hospitalization. There is a need for intervention with longitudinal group inpatient programs to reduce anxiety in the pregnant person.

Markers of Wnt/β-Catenin and PI3K/AKT/mTOR Signaling Pathways Have Prognostic Value for Uterine Leiomyosarcomas

Cecilia Mastrogiacomo[1], Alexander Fife[2], Cassandra Heiselman[1], Heidi Preis[1], Tracy Wu[2], Nataki Douglas MD[2], Mark Einstein[2,3], William Burke[1]

[1]Department of Obstetrics, Gynecology & Reproductive Medicine, Stony Brook University; [2]Rutgers-NJ Medical School; [3]Montefiore-Albert Einstein College of Medicine

Background: Uterine leiomyosarcomas (uLMS) are aggressive and have a poor response to standard therapies. Therefore, there is a clear clinical need for advancement in pharmacological management. The NOTCH, Wnt/β-Catenin, and PI3K/AKT/mTOR signaling pathways are key regulators of cellular development. New inhibitors of these pathways are under study as potential treatments in other malignancies.

Objective: This study aims to determine the association of tumor characteristics, patient characteristics, and clinical outcomes with the effectors of the NOTCH, Wnt/β-Catenin, and PI3K/AKT/mTOR pathways in uLMS samples.

Methods: Deidentified uLMS samples in the SBUH BioBank for 11 patients were used. Immunohistochemical staining determined percent of positively staining cells (PP) and the staining intensity for antibodies targeting the following markers: β-Catenin, NOTCH3, p-4EBP1, p-AKT, p-S6RP, and PTEN. Using a standardized methodology, PP was categorized as 1 to 4 and intensity was categorized as 0 to 3. ImmunoScore (IS) was defined as PP x intensity. Patient demographics, tumor characteristics, and outcome data were obtained via chart review. Statistical analysis was performed with SPSS software using Pearson $\chi 2$, Fisher-Freeman-Halton Exact, and Linear-by-Linear Associations tests.

Results: uLMS samples were obtained from patients with Stage T1b to T4b disease. Only 9.1% of subjects had progression free survival (PFS) at 2 years. The intensity (p<0.03) and IS (p<0.03) for β-Catenin were inversely associated with uLMS serosal involvement. There was also an inverse association between PP (p<0.03) and IS (p=0.001) for p-S6RP with uLMS stage. Similarly, IS for p-S6RP was significantly higher among those who achieved PFS over 6 months (p<0.05).

Conclusion: Wnt/β-Catenin and PI3K/AKT/mTOR pathways show associations with tumor characteristics, disease outcomes, and prognostic factors. Modulators of these pathways require further investigation as potential novel therapies.

Quality of Life After Prepectoral Implant-Based Breast Reconstruction: A Scoping Review

Kiersten Pflueger[1], Anne Moyer[1], Marci Lobel[1,2], Tara L. Huston[3], Devika Patel[1], Anastasia Bakoulis[3]

[1]Department of Psychology, Stony Brook University; [2]Department of Obstetrics, Gynecology & Reproductive Medicine, Stony Brook University; [3]Department of Surgery, Stony Brook University

Background: Prepectoral (PP) implant-based breast reconstruction (IBBR) is an increasingly used surgical treatment after mastectomy for breast cancer. Prior work shows favorable satisfaction, aesthetic, and complication outcomes. However, less is known about quality of life (QOL) after PP IBBR. Objective: This scoping review aimed to evaluate QOL outcomes following therapeutic post-mastectomy PP IBBR.

Methods: A scoping review used five electronic databases and hand searching to identify English, peer-reviewed empirical studies on QOL after IBBR. Two reviewers independently screened and extracted data for narrative synthesis. Of 264 records identified, 54 duplicates were removed. After screening 210 titles and abstracts, 32 studies met the inclusion criteria. Data were extracted, synthesized narratively, and organized according to the BREAST-Q Breast Cancer Framework for Breast Reconstruction.

Results: PP IBBR generally led to stable or improved physical, psychosocial, and sexual well-being. Conversion from subpectoral to PP placement consistently resolved AD. Direct comparisons between planes showed mixed findings.

Conclusion: PP IBBR supports favorable QOL outcomes for women undergoing surgical treatment for breast cancer. Understanding how reconstructive approaches impact physical comfort, body image, and sexual comfort is key to advancing women's health equity and supporting informed, patient-centered decision-making. However, study heterogeneity in design, measurement, and follow-up limits conclusions. Larger, longitudinal, and mixed-methods studies are needed.

Gendered Racism and Anticipated Pregnancy-Specific Stress Among Non-Pregnant Nulliparous Black, Latina, and Multiracial Women

Emily Rehbein[1,2], Gianna Monte[1], Kim Muellers[1], Daiyah Williams[1], Chi-Chi Egodigwe[1], Marci Lobel[2,3], Lisa Rosenthal[1]

[1]Department of Psychology, Pace University; [2]Department of Psychology, Stony Brook University; [3]Department of Obstetrics, Gynecology & Reproductive Medicine, Stony Brook University

Background: Black, Latina, and Indigenous Women in the U.S. experience disproportionate rates of adverse reproductive health outcomes. Discrimination, stigma, and resulting stress are potent contributors to reproductive and other health disparities. Objective: We investigated experiences of gendered racism (GR), anticipated pregnancy-specific GR and anticipated pregnancy-specific stress (PSS) in a hypothetical future pregnancy, as well as desire to have children among a geographically diverse sample of non-pregnant, nulliparous adult U.S.

Method: Women recruited and surveyed online who identified as Black/African, Latina/Hispanic, Multiracial (including Black and/or Latina), and/or white (N = 872). Study instruments were previously validated, with some adapted for the present research.

Results: Results confirmed that Black/African, Latina/Hispanic, and Multiracial Women experienced and anticipated greater GR and less desire to have children than did white Women. As hypothesized, GR experiences were associated with greater anticipated PSS, and this association was mediated by greater anticipated pregnancy-specific GR. Additionally, among only Black, Latina, and Multiracial Women (n = 315), birth control-related mistrust—a consequence of historical and contemporary GR—was indirectly associated with greater anticipated PSS through greater anticipated pregnancy-specific GR.

Conclusion: Findings demonstrate that GR can shape expectations about pregnancy before it occurs, potentially elevating stress during pregnancy and thereby heightening the risk of adverse birth outcomes among Black, Latina, and Multiracial Women. This research offers a life course perspective on how stigma, GR, and stress contribute to racial/ethnic disparities in the reproductive health of birthing people and has numerous implications for interventions aimed at social justice, prevention, and health promotion across the lifespan.

Propensity-Matched Analysis of the Association Between Fuchs Endothelial Corneal Dystrophy and Osteoporosis in Female Patients

Michelle Kim[1], Anjali Kumar[1], Sarah Weissbart[2], Deirdre Eschler[3]

[1]Renaissance School of Medicine, Stony Brook University; [2]Department of Ophthalmology, Stony Brook University; [3]Department of Endocrinology, Stony Brook University

Background: Fuchs endothelial corneal dystrophy (FECD) is an eye disease characterized by irreversible corneal endothelial cell loss. It is the leading indication for corneal grafting worldwide, yet its pathophysiology remains poorly understood. FECD is significantly more common in females than males (3:1), particularly postmenopausal women, and evidence suggests that aberrant estrogen activity may contribute to its progression. Given estrogen's established role in osteoporosis, an examination of its association with FECD may elucidate estrogen-related mechanisms in FECD pathogenesis.

Objective: To assess the association between FECD and osteoporosis.

Methods: The TriNetX database was used to conduct a retrospective cohort study (2005-2025). All female patients aged ≥40 years were included. FECD patients (ICD-10: H18.50, H18.51) were compared with matched cataract controls (ICD-10: H25), without FECD. 1:1 propensity score matching (PSM) of demographics, comorbidities, vitamin D deficiency, tobacco and alcohol use, and medication use (exogenous hormonal therapy, steroids, and proton pump inhibitors), was performed to minimize potential confounding. Odds ratios (ORs) with 95% confidence intervals (CIs) were calculated to assess the association between FECD and osteoporosis. Sensitivity analyses were performed in patients aged ≥50 years and ≥60 years to ensure reliability of results.

Results: After PSM, there were 9,711 patients in FECD and control cohorts each. Patients with FECD had increased odds of developing osteoporosis (OR 1.14, 95% CI 1.07–1.21) compared with matched controls. This finding was consistent in patients aged ≥50 years (OR 1.16, 95% CI 1.09–1.24) and ≥60 years (OR 1.13, 95% CI 1.06–1.21).

Conclusion: FECD is positively associated with osteoporosis in female patients, suggesting that estrogen deficiency may contribute to corneal endothelial cell degeneration. Further studies are warranted to clarify the precise mechanisms.

Spatial Mapping of Acidic Macrophage Niches and Extracellular Vesicle Remodeling in Ovarian Cancer

Sogol Ghanbari[1], Naheel Khatri[1], Emma Downey[1], Elayna Kirsch[2], Marilyn Day[2], Cecilia Mastrogiacomo[2], Susan Lang[2], Gabrielle Gossner[2], William Burke[2], Mehdi Damaghi[1]

[1]Stony Brook Cancer Center; [2]Department of Obstetrics, Gynecology & Reproductive Medicine, Stony Brook University

Background: Ovarian cancer remains a leading cause of gynecologic cancer mortality, driven by late diagnosis, peritoneal dissemination, and therapy resistance. Beyond tumor genetics, the ovarian tumor microenvironment contains metabolically stressed regions, especially acidosis, that shape immune cell behavior. Tumor-associated macrophages (TAMs), abundant in ovarian tumors, may promote immune suppression through extracellular vesicle (EV)–mediated signaling.

Objective: This study spatially maps acidic TAM niches in ovarian cancer and examines how tumor-associated acidosis alters TAM EV output and lipid cargo.

Methods: Primary ovarian tumors were obtained at Stony Brook University Hospital. TAMs were isolated and validated by immunocytochemistry and exposed to short-term acidic conditions to model tumor acidosis. EVs were isolated by ultracentrifugation and analyzed by lipidomics. Spatial profiling was done using MACSima multiplex imaging and MALDI-based spatial lipidomics, followed by co-registration of protein and lipid maps. Acidic microenvironments were defined as $CA9^+/GLUT1^+$-enriched cell neighborhoods, indicating acidosis and metabolic stress.

Results: Preliminary data show that acidosis increases EV-associated machinery in TAMs and elevates EV output. Lipidomic profiling reveals early remodeling of EV sphingolipids, including ceramides and sphingomyelins, within hours of acid exposure. Spatial analyses indicate that metastatic ovarian tumors contain expanded $CA9^+/GLUT1^+$ acidic niches enriched with TAMs compared to primary tumors. Acidic TAM-enriched regions show lipid profiles consistent with an enhanced survival advantage compared to non-acidic regions.

Conclusion: These findings suggest that tumor acidosis spatially reprograms TAMs and their EV lipid cargo, potentially leading to immune suppression in metastatic disease. Mapping stress-adapted TAM niches may inform microenvironment-targeted therapeutic strategies to improve outcomes in women with ovarian cancer.

Poster Presentation Abstracts

A Two-Year Analysis of Appointment Non-Attendance at a Free Gynecologic Clinic

Lisa Jackson[1], Alexa Letizia[1], Francesca Deieso-Frechette[1], Alexandra Kiefer[2]

[1]Renaissance School of Medicine, Stony Brook University; [2]Department of Obstetrics, Gynecology & Reproductive Medicine, Stony Brook University

Introduction: Appointment non-attendance delays patients' access to healthcare and lengthens wait-times. This problem is especially prevalent among uninsured, low-income populations who often lack access to transportation and may not understand the visit reason. This analysis seeks to identify trends in appointment non-attendance at a free gynecology clinic on Long Island, New York.

Methods: A retrospective chart review was conducted to examine appointment non-attendance. Intake forms were used to collect demographic information, such as address, income, and brief health literacy scores (BHLS). Statistical analysis was completed as appropriate. IRB2025-00460.

Results: Out of 243 total appointments over 24 clinic days, 80% were attended by 109 patients. Of the 48 missed appointments, 38 were never rescheduled. Almost 59% of unattended appointments were annual exams, 31% were follow-up visits, and 10% were injections. The average area deprivation index (ADI) of attendees was 5.4, versus 5.7 for non-attendees. The average distance to clinic in miles was nearly identical for both groups. Among those who rescheduled, the average time to the next appointment was 3 months. The average BHLS for all patients was 12.3, falling between the "limited" and "marginal" health literacy categories.

Conclusion: Appointment non-attendance impacts health outcomes and increases wait-times for patients. Although the ADI and average miles to clinic were similar between attendees and non-attendees, the BHLS among all patients was below the national average. Further investigation should elicit how these factors impact patients like ours to improve attendance at scheduled appointments for no-cost care.

Increasing HPV Vaccination at a Free Gynecological Clinic

Lisa Jackson[1], Alexa Letizia[1], Francesca Deieso-Frechette[1], Alexandra Kiefer[2]

[1]Renaissance School of Medicine, Stony Brook University; [2]Department of Obstetrics, Gynecology & Reproductive Medicine, Stony Brook University

Introduction: HPV vaccine coverage is suboptimal, especially among the uninsured. While there is evidence that high-quality provider recommendations and addressing barriers can increase HPV vaccination rates, few investigations have applied these strategies to free clinics. Objective: This intervention aimed to increase the rate of HPV vaccination at a free gynecological clinic by combining administrative strategies with a targeted educational intervention.

Methods: The first phase of this intervention involved decreasing administrative barriers to completing financial assistance forms for eligible patients visiting the clinic for annual exams and problem visits. The second component was creating and implementing a targeted, evidence-based educational resource on the HPV vaccine into our clinic workflow to enhance patient counseling. A chart review and statistical analysis were conducted to determine whether the vaccination rate at the clinic differed after implementation. IRB2025-00460

Results: The pre- and post-intervention groups had a similar percentage of HPV vaccine-eligible patients based on age criteria (74% vs 69%). Pre-intervention, 6 doses were administered over 14 monthly clinics, with an average of .43 doses per clinic. In the post-intervention group, 13 doses were administered over 10 monthly clinics, with an average of 1.3 doses per clinic. This increase in average number of doses per clinic day was significantly greater after the intervention ($t(22) = 2.233$, $p = .036$).

Conclusion: Our targeted, low-cost, evidence-based administrative and educational intervention successfully increased HPV vaccination at a free gynecological clinic. We hope that sharing our results will inspire other providers to employ these techniques to increase HPV vaccinations at free clinics.

Does Diversity, Equity, and Inclusion (DEI) Content Across MFM Fellowship Websites Differ Geographically?

Samantha Gobioff, Zenobia Gonsalves, Alexandra Zetye, Kimberly Herrera, Cassandra Heiselman

Department of Obstetrics, Gynecology & Reproductive Medicine, Stony Brook University

Background: Increasing diversity and equity in healthcare has the potential to improve patient outcomes. Objective: To determine if DEI content on MFM fellowship websites differs across the U.S.

Methods: This was a cross-sectional analysis of DEI represented on MFM fellowship program websites. In July 2025, ACGME accredited program websites were accessed. 100 programs were available for analysis. Diversity Elements (DEs), as defined by Winget et. al (AJOG, 2023), were collected. The number of represented DEs was tabulated and then compared geographically across the standard U.S. geographic regions (4) and divisions (9). Chi-square, Fisher's exact, and Kruskal-Wallis analyses were performed, with a p-value < 0.05.

Results: The mean number of DEs on websites was 4.14 (SD 1.62), the most represented being "Faculty Photos" (92%) and "Fellow Photos" (86%). The proportion of programs with robust representation (≥6 DEs) did not differ by region (p=0.20) or division (p=0.06), and only 18% of total websites met this criterion. However, the presence or absence of several individual elements did have significant geographic variation. Programs in the West had higher website representation of "Additional Diversity Resources" (37.5%, p=0.035) and "Diversity Inclusion Message" (68.8%, p<0.001) than other regions, and specifically within the West North Central division with 54.5% (p=0.03) and 72.7% (p=0.01), respectively. Programs in the South had a lower website representation of "Diversity Inclusion Message" at 10% (p< 0.001). No other representation of DEs varied by either region or division.

Conclusion: Overall, robust representation of diversity elements on MFM fellowship websites was not high, and most did not differ across the country. Some DEs had better representation in the Western programs, whereas there was a lower rate of "Diversity Inclusion Message" in Southern programs, which may represent different political and cultural climates in these regions.

Fetal Fraction Percentages on Cell-Free DNA as Predictors of Preterm Birth and Hypertensive Disorders

Rachel Lee[1], Susan Wu[2], Mackenzie Herron[2], Ricky Dartawan[2], Isabelle Levine[2], Heidi Preis[1,3], Mayi Gnofam[1,4], Kimberly Herrera[1], David Garry[1], Cassandra Heiselman[1]

[1]Department of Obstetrics, Gynecology & Reproductive Medicine, Stony Brook University; [2]Renaissance School of Medicine, Stony Brook University; [3]Department of Psychology, Stony Brook University; [4]Program in Public Health, Stony Brook University

Background: Prenatal cell-free DNA (cfDNA) screening has been widely validated and as a highly accurate screening test for trisomies 13, 18, 21, and sex chromosome aneuploidies. The majority of cfDNA originates from the mother with the fetal component (fetal fraction; FF) making up 10-20%. While FF appears to be correlated with risk of trisomies, little is known about how FF is related to pregnancy complications and fetal outcomes. Objective: To evaluate the association of low and high FF on cfDNA with pregnancy outcomes.

Methods: This is a single center retrospective live birth cohort study of participants who underwent cfDNA screening from 2021 to 2023. Participants were categorized into three groups: low (FF≤4%), normal (4%<FF>16%), and high (FF≥16%). Baseline demographics, clinical characteristics, and perinatal outcomes were abstracted from medical records. Variables were compared using Chi-square, Fisher's exact, and multivariable logistic regression, with a p-value <0.05.

Results: 1,774 pregnancies were included of which 10.2% had low FF, 5.2% had high FF, and 84.6% had normal FF. Obesity was associated with higher rates of low FF (13.8%) and lower rates of high FF (3.5%) (p<0.001). Having government insurance was associated with higher rates of high FF (7.3%) (p=0.03), and those with high FF were on average two years younger than normal and low FF (p=0.002). Chronic hypertension (CHTN) was associated with higher rates of low FF (9.9%, p<0.001). In a multinominal logistic regression, CHTN was associated with low FF (aOR 2.55, 95% CI 1.11-5.89). Low FF was associated with higher rates of preterm birth (PTB) (10.5%) compared to normal (5.8%) and high FF (5.4%) (p=0.05). Binary logistic regression indicated that low FF was associated with 78% higher odds of PTB (aOR 1.78, 95% CI 1.04-3.04).

Conclusion: There is a risk of low FF in participants with CHTN and obesity, as well as a higher PTB rate, which was not seen with high FF.

An Investigation into a Large, Suburban, Academic Hospital's Sexual Assault Response Program

Alexa Courtepatte[1], Hannah Agoglia[1], Michelle Tepper[2], David Cohen[1]

[1]Renaissance School of Medicine, Stony Brook University; [2]Forensic Nursing and Family Violence Prevention

Background: SA is a pervasive medical and public health crisis with an average of 463,634 cases reported annually in the United States. Victims of SA are an often underserved and understudied patient population. This study aims to profile SA patients and their hospital encounters, and to identify the resources necessary for effective management.

Methods: This study is a descriptive, retrospective chart review of all patients >18 who presented to the emergency department with a diagnosis of sexual assault or rape between January 1, 2015 and July 1, 2024. Demographics, hospital stay, and assault characteristics were extracted from patients' medical records. Odds ratios were calculated with logistic regression models. P-value of <0.05 was considered significant.

Results: 309 patients were included, the majority of whom were female (89.0%), White (65.3%), and non-Hispanic (76.1%). Nearly all patients requested a SAFE exam (86.1%), and 10.5% left before arrival of the SAFE examiner. 43.0% had law enforcement involvement. Many patients (37.5%) had a pre-existing psychiatric comorbidity; 18.8% with depression and 7.1% with PTSD. 10.4% of assaults occurred in a group home, nursing facility, rehab facility, or shelter. Patients with a psychiatric history had 0.40 times the crude odds of requesting a SAFE exam, and 0.38 times the crude odds of obtaining HIV testing compared to their counterparts. Patients with no known relationship with their assailant had 2.53 times adjusted odds of completing a sexual offense evidence kit compared to those with a known relationship with their assailant.

Conclusion: This study highlights the importance of offering mental health resources and group/nursing home support from the ED. This study illustrates focus areas for in-hospital interventions of SA response programs and provides a deeper understanding of SA patients for ED physicians.

Vasa Previa Rupture Identified on Ultrasound Prior to Symptom Onset: A Case Report

Alexandra Zetye, Jayne Thide, Jennifer Choi, Kimberly Herrera, Cecilia Avila

Department of Obstetrics, Gynecology & Reproductive Medicine, Stony Brook University

Background: Vasa previa is a rare condition in which unprotected fetal vessels lie over or near the cervical os, placing the fetus at risk for sudden exsanguination if rupture occurs. Ultrasound diagnosis is highly accurate, with Doppler imaging used to confirm fetal vessels crossing the cervix. Three subtypes exist, associated with velamentous cord insertion (Type I), succenturiate or bilobed placentas (Type II), or vessels within a single placental mass (Type III). Management generally includes antenatal hospitalization, surveillance, corticosteroids, and planned cesarean delivery before labor or membrane rupture. There is currently limited ability to predict vasa previa rupture and optimally time delivery.

Case: A 33-year-old G2P0010 with suspected Type III vasa previa presented at 28 weeks and was admitted at 32+3 weeks for monitoring, with cesarean delivery planned at 35+3 weeks. At 34+3 weeks, during routine ultrasound, echogenic fluid consistent with blood was observed flowing through the cervical canal, followed seconds later by vaginal bleeding and lightheadedness. An emergent cesarean section was performed, delivering a female infant with reassuring Apgar scores and normal hemoglobin.

Placental examination showed three placental lobes connected by multiple unprotected vessels, consistent with an atypical Type II vasa previa. The main vessel crossing the os remained intact; a smaller connecting vessel was identified as the rupture site, likely limiting fetal blood loss.

Conclusion: This appears to be the first documented case of sonographic visualization of vasa previa rupture immediately before symptom onset. Real-time identification of active bleeding enabled rapid delivery prior to fetal compromise. The case highlights challenges in accurately classifying vasa previa subtypes and suggests that point-of-care ultrasound may aid in evaluating unexplained third-trimester bleeding. Careful imaging remains essential, as small-vessel rupture may occur despite reassuring fetal status.

Physical Activity and Momentary Cognitive Performance Among Breast Cancer Survivors in Daily Life

Samantha S. Corley[1], Brent J. Small[2], Stacey B. Scott[1]

[1]Department of Psychology, Stony Brook University; [2]University of North Carolina at Chapel Hill, School of Nursing

Background: Over 4 million breast cancer survivors live in the United States. Cancer-related cognitive impairment (CRCI) is a distressing experience reported by many breast cancer survivors (BCS). Physical activity may ameliorate CRCI, but a majority of BCS are not meeting the American Cancer Society (ACS) guidelines of moderate to vigorous physical activity (MVPA) shown by retrospective reports.

Objective: This study aimed to profile female BCS's daily physical activity compared to ACS guidelines. Further, we aimed to examine the associations between self-reported MVPA and momentary cognitive performance in daily life.

Methods: During a 14-day study, survivors were prompted 5 times daily on smartphones with processing speed and working memory tasks; each evening they self-reported their physical activity and fatigue. Participants also retrospectively reported on their physical activity using a widely used questionnaire. Multilevel models tested associations between cognitive performance and physical activity, covaried by age and fatigue.

Results: The all-female BCS sample (N=46) was on average 17.15 months (SD=7.29) posttreatment for Stage I (26.09%) and Stage II (73.91%). They were predominantly White, non-Hispanic, middle-aged, and highly educated. A majority (78.26%) exceeded ACS guidelines. Survivors who reported more MVPA showed significantly worse working memory. None of the within-person relationships of MVPA with cognitive outcomes were statistically significant. Survivors who reported being more fatigued at the end of the day demonstrated significantly worse performance for working memory.

Conclusions: This study was the first to examine both same-day associations between MVPA and cognitive performance as well as individual differences amongst female BCS. Additional daily life research needs to be conducted during different timepoints post-treatment to help further understand this relationship and perhaps inform potential interventions among female BCS.

Do Patients Remember What Was Done? Accuracy of Recall After Surgery for Pelvic Floor Disorders

Natalie Braun[1], Zhenyue Huang[2], Tal Cohen[2], Spencer Griffin[1], Sara O'Sullivan-Bakshi[2], Jason Kim[2]

[1]Renaissance School of Medicine, Stony Brook University; [2]Department of Urology, Stony Brook University

Background: Accurate patient recall of prior surgery is essential for evaluation and planning, especially when records are unavailable. Patients often use the term "bladder lift" to describe various surgeries for pelvic organ prolapse (POP) or stress urinary incontinence (SUI).

Objective: Few studies assess what patients mean by this term or how well they recall their surgery. We aimed to evaluate patient perception and recall of prior surgeries for SUI/POP and identify factors linked to recall accuracy.

Methods: A 14-item questionnaire was completed by female patients >18 years with POP/SUI surgery >1 year prior. Self-perceived understanding was rated on a 10-point Likert scale. Patient recall was compared with operative reports. Fisher's exact, Mann-Whitney U, and multivariable regression were used (SPSS v31.0).

Results: Fifty-six participants with operative records available were analyzed; 77% of procedures were performed by urologists. Twenty-six (47%) reported a "bladder lift," but only 12 (46%) identified the indication correctly. Although 39 operative reports documented sling placement, only 14 (36%) accurately recalled having a sling. Of those reporting a "bladder lift," 85% had actually undergone a sling. Seventeen (30%) inaccurately recalled mesh use. Among 37 patients reporting high understanding (score 8-10), 16 (43%) misidentified. Accurate recall of mesh use was higher among those with surgery <5 years ago (22/27, 81.5%) than ≥5 years ago (17/29, 58.6%; p=0.063). In multivariable regression, no demographic factor predicted accuracy. Longer time since surgery showed lower recall (aOR 0.29 95% CI 0.08–1.09, p = 0.067), though not statistically significant.

Conclusion: Patients showed limited accuracy in recalling prior POP/SUI surgeries. Nearly one-third of patients demonstrated inaccurate recall of mesh use and one half misidentified surgical indication. Recall appeared to decline with time, underscoring the impact of recall bias in surgical history.

Sex-Based Differences in Anesthesiology and Perioperative Medicine

Shruti Parikh, Ana Costa

Department of Anesthesiology, Stony Brook University

Background: Anesthesiology and perioperative management incorporate principles of pharmacology and physiology. Pharmacokinetics and physiological responses of anesthetic agents have been well-studied. However, there is a gap in sex-specific responses to anesthesia with a lack of women-specific research. Historically, this gap has been widespread in medicine. It was only in 1990 when guidelines were released by the United States National Institute of Health for the inclusion of both sexes in clinical trials.

Objectives: The goal of this review is to describe sex-based differences in responses to common anesthetic medications and their effects on anesthesia outcomes. Methods: We performed a literature review of all studies pertinent to sex and gender-based differences in anesthesiology and perioperative medicine. This included all anesthetic agents and post-anesthesia outcomes including pain, awareness and post-operative nausea and vomiting (PONV).

Results: Women are less sensitive to common anesthetic agents such as inhaled anesthetic gases and intravenous propofol and require higher amounts of anesthesia to achieve the same level of anesthetic depth compared to men. Women are also less sensitive to local anesthetics. On the flip side, women are more sensitive to opioids and require lower doses compared to their male counterparts. Similarly, female sex is a known risk factor for PONV, however a clear cause is yet to be identified. Additionally, women are at a higher risk of experiencing awareness under general anesthesia since their anesthetic requirements are higher.

Conclusions: Understanding sex-based differences in anesthetic responses is crucial in improving perioperative management. By recognizing these differences, anesthesiologists can be better equipped to provide patient-tailored anesthesia and minimize undesirable outcomes including PONV, awareness and recall. Further research focused on the perioperative implications of anesthesiology to women is needed.

Effects of a Multicomponent Intervention on Breastfeeding Knowledge, Self-Efficacy, and Intention Among Ex-Smoking Mothers

Xiaozhong Wen[1], Hannah Small[1], Alisinah Halimi[1], Julia Quan[1], Ariana Surguy-Bowers[1], Becka Konnayil[1], Leonard Epstein[1], Faye Justicia-Linde[1], Rina Eiden[2], Yukiko Washio[3]

[1]State University of New York at Buffalo; [2]Pennsylvania State University; [3]RTI International, Research Triangle Park, NC

Background: Breastfeeding practices are often compromised among women who smoke cigarettes or recently quit smoking. Objectives: We aimed to develop a multicomponent intervention to improve breastfeeding outcomes by enhancing breastfeeding knowledge, self-efficacy, and intention among ex-smoking mothers.

Methods: From 2019–2021, we conducted a pre–post intervention study with 82 pregnant or early postpartum women (≥18 years) in New York who previously smoked. Participants completed laboratory screening, a pre-test assessment, three weekly intervention sessions, and a post-test visit. The intervention included breastfeeding education, lactation counseling, and financial incentives. Validated questionnaires measured general breastfeeding knowledge, newborn feeding ability knowledge, breastfeeding self-efficacy, and intention at both time points. Paired t-tests assessed changes in knowledge and self-efficacy scores, and Chi-square or Fisher's Exact tests evaluated changes in breastfeeding intention.

Results: From pre- to post test, there was a statistically significant increase in general breastfeeding knowledge (25.99 ± 10.94 to 36.24 ± 8.56; $p<0.001$), newborn feeding ability knowledge also improved (13.21 ± 5.99 to 16.82 ± 4.85; $p<0.001$, and breastfeeding self-efficacy scores rose similarly (142.38 ± 25.70 to 156.82 ± 21.45; $p<0.001$). The proportion of mothers intending to exclusively breastfeed in the first weeks postpartum increased from 75.6% to 88.9% ($p=0.027$). Supplemental analyses indicated that participants receiving in-person sessions showed slightly greater gains in knowledge and self-efficacy than those who received virtual sessions during the COVID-19 pandemic.

Conclusions: This multicomponent intervention improved breastfeeding knowledge, self-efficacy, and exclusive breastfeeding intention among ex-smoking mothers—an underserved population facing persistent breastfeeding disparities.

Examining Community Engagement in Perinatal Research: A Scoping Review of Community-Academic Partnerships in the United States

Giselle A. Gerardi[1], Rachel Lee[2], Zenobia Gonsalves[2], Caroline Doscas[1], Sunny Chung[3], Cassandra Heiselman[2], Kimberly Herrera[2]

[1]School of Nursing, Stony Brook University; [2]Department of Obstetrics, Gynecology & Reproductive Medicine, Stony Brook University; [3]University Libraries, Stony Brook University

Background: Despite increases in maternal health research, maternal mortality in the U.S. remains higher than in other high-income countries. Limited improvement in outcomes suggests that traditional, researcher-driven models have not consistently produced effective, community-aligned solutions. Community–academic partnerships (CAPs) offer a collaborative approach by incorporating community priorities into the research process to improve maternal health outcomes.

Objective: To examine the extent and characteristics of CAPs in U.S. maternal health research, focusing on roles, contributions, and integration of community partners.

Methods: A scoping review guided by the Joanna Briggs Institute Methodology was conducted. A systematic search of PubMed, CINAHL, Cochrane, Embase, MEDLINE (Ovid), Web of Science, and ProQuest identified U.S.-based, peer-reviewed perinatal studies published between 2004 and 2023 that described CAPs. Inclusion criteria included studies that involve pregnant populations and explicitly describe community engagement. Two reviewers independently screened titles, abstracts, and full texts on partnership structure, partner roles, and maternal health topics. Thematic analysis categorized involvement across the research lifecycle.

Results: Thirty-five studies met the inclusion criteria (2007–2023). Most (63%) used qualitative methods; 74% focused on Black, Indigenous, and People of Color populations; 57% addressed health equity or disparities. Nine studies reported compensating community partners; eight offered research training. While community partners contributed across multiple research phases, the depth and consistency of engagement varied.

Conclusion: CAPs in maternal health research are increasingly used to advance equity, particularly among underrepresented populations. However, engagement remains inconsistent. Greater transparency in documenting partner roles and more intentional collaborations are needed.

Are Characteristics in Pregnancies With Opioid Use Disorder (OUD) Associated With Neighborhood Disadvantage?

Zenobia Gonsalves[1], Claire Burghard[2], Rachel Lee[1], David Garry[1], Kimberly Herrera[1], Cassandra Heiselman[1]

[1]Department of Obstetrics, Gynecology & Reproductive Medicine, Stony Brook University; [2]Renaissance School of Medicine, Stony Brook University

Background: Social determinants of health contribute to both opioid use disorder (OUD) and obstetric outcomes. The Area Deprivation Index (ADI) is a tool that displays the relative socioeconomic conditions of neighborhoods and ranks them on their level of disadvantage. Literature on the association between neighborhood disadvantage and pregnancies with OUD is sparse.

Objective: To determine the relationship between ADI and pregnancy characteristics in patients with OUD who are on medications for OUD (MOUD).

Methods: This was a retrospective study of pregnant patients on MOUD who delivered at a single institution between 2017 and 2023. The ADI was determined using University of Wisconsin's Neighborhood Atlas based on the patient's mailing address at time of delivery admission. ADI was characterized as a state decile ranging from 1 to 10, with 10 representing the highest deprivation areas. Charts were abstracted for maternal characteristics and key perinatal outcomes. Statistical analyses were performed using Mann-Whitney U, Chi-square, and Spearman's correlation tests, with a p-value < 0.05 deemed statistically significant.

Results: 404 patients were included in the analysis. A difference was found in median distributions of ADI scores for patients with white race ($p=0.04$), government insurance ($p=0.04$), multiparity ($p=0.02$), and MOUD started in pregnancy ($p=0.02$). When comparing those with ADI $>= 6$ and ADI <6, a difference was noted in the proportion of patients with government insurance ($p=0.02$) and on psychiatric medications ($p=0.03$). A weak association was noted between ADI score and parity ($rs = 0.116$, $p=0.02$).

Conclusion: Pregnant MOUD patients residing in more highly disadvantaged neighborhoods were more likely to be multiparous, of white race, have government insurance, have started MOUD in pregnancy, and be on psychiatric medications concomitantly. Additionally, a higher deprivation index was weakly associated with higher parity.

More Symmetric Language Regions in Females and Older People

Olivia Egbert, Xi Chen

Department of Psychology, Stony Brook University

Background: Brain division into two hemispheres is a crucial organizational feature. Structural asymmetries between left and right hemispheres differ across sexes and ages. This difference in asymmetry may influence how some integrative tasks are performed in different people. In particular, language is known to be a complex function that is left-lateralized in the brain. Meanwhile, verbal language ability increases with healthy aging and has a slight female advantage.

Objective: To explore the structural asymmetry of language regions in male and female participants of different ages.

Methods: We used MRI scans collected in the Dallas Lifespan Brain Study, including three waves of data with approximately four years apart between each wave. A total of 463 participants (62% females, 21-89 yrs), who were physically and cognitively healthy, were included at baseline, with 194 (64% females) remaining in the third wave. We focused on examining the structural asymmetry of Broca's area, Wernicke's area, and Heschl's gyrus, all of which are important for language processing.

Results: At baseline, Wernicke's area and Heschl's gyrus were both left lateralized in volume and area size, but right lateralized in thickness. Interestingly, this overall right thickness lateralization differed across people: Wernicke's area was more symmetric in older people, and Heschl's gyrus was more symmetric in females, both groups of whom had better language ability. Longitudinal analyses revealed that over time Heschl's gyrus gained bilaterality and this change differed by sex. Males lost thickness in their right Heschl's gyrus faster than females did. Lastly, Broca's area, consisting of two subregions, both showed age- and sex-invariant asymmetry, cross-sectionally and longitudinally.

Conclusions: Language regions are more symmetric in females and in healthy aging. This potentially reveals the neural basis for the better preservation of language function in women as they age.

The Invisible Intersection — Asking Women and Gender-Diverse Patients About Military Service

Maria A. Basile

Department of Family, Population, and Preventive Medicine, Stony Brook University

Background: Military service is a critical but often overlooked determinant of health among women and gender-diverse patients. Standard medical histories rarely include questions about military experience, leaving invisible intersections of trauma, occupational exposures, and cultural identity unrecognized. This omission perpetuates disparities in care and contributes to feelings of invisibility among those who have served.

Objectives:

- To examine the importance of routinely asking women and gender-diverse patients about military service.

- To highlight how military experience intersects with health outcomes, including mental health, reproductive health, and chronic disease.

- To propose strategies for integrating military service questions into clinical practice.

Methods: This work synthesizes existing literature on women veterans and gender-diverse service members with qualitative reflections from clinical encounters. Case-based examples illustrate how disclosure of military service reshapes diagnostic reasoning, therapeutic alliance, and access to resources.

Results: Findings suggest that women and gender-diverse veterans often feel unseen in healthcare settings. Many will not volunteer a history of military service unless they are prompted. Asking about military service can uncover medically relevant information such as toxic exposures, history of trauma, and reproductive health challenges. Clinicians who incorporate military history into routine intake foster trust and improve patient-centered care.

Conclusion: Recognizing the military service of women and gender-diverse patients broadens the lens of women's health practice and research. A simple but often neglected question, "Have you ever served in the military?" illuminates hidden intersections and advances equity for women and gender-diverse patients. Integrating this inquiry into routine assessments can improve outcomes, reduce disparities, and strengthen therapeutic relationships.

Factor Structure of the Edinburgh Postnatal Depression Scale in a Diverse Community Sample

Caralie Price[1], Christine M. Guardino[2]

[1]School of Public Health, Yale University; [2]Department of Psychology, Stony Brook University

Background: Perinatal mood and anxiety disorders (PMAD) negatively affect the health and well-being of parents and children. Public health guidelines recommend routine screening to identify symptoms early and facilitate timely treatment. The Edinburgh Postnatal Depression Scale (EPDS), a widely used 10-item measure endorsed by the American College of Obstetricians and Gynecologists, was originally designed to screen for postpartum depression. However, evidence suggests the EPDS is multidimensional and may also capture anxiety symptoms.

Objective: To evaluate the EPDS factor structure in a community sample of low- and middle-income Black, Latina, and White mothers using confirmatory factor analysis (CFA) and assess whether structures identified in prior research generalize to underrepresented populations.

Methods: Data were drawn from the Community Child Health Network (CCHN), a multi-site U.S. study of maternal health disparities. Mothers completed the EPDS at 2–16 weeks postpartum (T1; n = 2,268) and 24–39 weeks postpartum (T2; n = 1,278). CFA compared a one-factor model and two three-factor models (Anhedonia, Anxiety, Depression) differing in placement of item 6 ("things have been getting on top of me"). Model fit was evaluated using CFI, RMSEA, TLI, and SRMR.

Results: At both time points, the three-factor model with items 1–2 loading on Anhedonia, items 3–5 on Anxiety, and items 6–10 on Depression provided the best fit (e.g., CFI = .987 at T1, .985 at T2; RMSEA = .046 at T1, .051 at T2; TLI = .982 at T1, .979 at T2; SRMR = 0.26 at T1, 0.032 at T2).

Conclusion: Findings support a multidimensional EPDS structure in postpartum mothers, consistent with prior research, and highlight distinct factors for anhedonia, anxiety, and depression. Recognizing the EPDS's multifactorial structure can improve interpretation of screening measures and inform clinical management of perinatal mental health.

Missed, Misread, or Misstaged: Lessons Learned from Outside Breast Imaging

Brandon Euker, Deven Kulkarni, Kevin Tan, Anam Chouhdry, Melinda Staiger, Sushma Gaddam, Neil Adler, Cindy S. Lee

Stony Brook University Hospital

Background: Missed breast cancers are tumors retrospectively visible on prior mammograms that were initially read as normal or benign. The most common cause is perceptual error, although it is often unclear whether the abnormality was overlooked or just misjudged. These errors can result in underestimation of disease extent or delayed diagnosis, which may result in upstaging, changed management and poorer patient outcome. At our institution, we recently implemented repeat diagnostic imaging of all breast cancer patients diagnosed at outside facilities.

Learning Objectives: 1. Demonstrate cases of missed breast cancers and their impact on patient management and outcome 2. Review and describe common types of diagnostic errors in breast imaging 3. Discuss practical strategies to mitigate these errors

Methods: Cases of missed breast cancers from outside facilities in which repeat diagnostic mammogram and ultrasound at our institution revealed findings that altered diagnosis and management were collected and analyzed for causes of error.

Results: We will demonstrate specific examples of perceptual errors and explore how cognitive biases common in radiology practices contribute to errors in breast imaging. We will discuss practical strategies to recognize and mitigate such biases to avoid errors, along with a review of the characteristics of the imaging features most often missed or mischaracterized, including the type of mass, location of the lesion, and degree of nodal involvement.

Conclusion: Performing a comprehensive diagnostic evaluation for all new breast cancer patients from outside institutions proves to be a value-adding activity. It not only significantly changes cancer staging, surgical-oncological management and treatment options, but also reduces avoidable surgical re-excisions and residual disease. By systematically addressing these vulnerabilities, radiologists can improve diagnostic accuracy and prevent missed or understaged cancers.

Different Exits, Same Stay: Gender-Specific Recovery Pathways After Geriatric Trauma

Ambika Mukhi, James Vosswinkel, Randeep S. Jawa

Department of Surgery, Stony Brook University

Background: Discharge destinations among older trauma patients remain incompletely characterized by gender and serve as a marker of post-injury functional status and need for ongoing care. Objectives: To assess whether patient gender is associated with discharge disposition and hospital length of stay (HLOS) among older adult trauma patients and to describe gender-associated differences in post-acute rehabilitation (rehab) utilization.

Methods: We performed a retrospective cohort study using a Level I Trauma Center registry, including adults aged ≥65 years admitted for blunt traumatic injury (2017-2023). Gender (female vs male) was the primary variable of interest. Outcomes included discharge disposition and HLOS. Rehab discharges were stratified as acute (AR) or subacute (SAR). Univariate analyses compared outcomes by gender. Multivariable logistic regression evaluated discharge to rehab versus non-rehab. Log-transformed HLOS was analyzed using linear regression due to skewed distribution. Models adjusted for age, injury severity, and pre-existing comorbidities.

Results: Among 5,660 patients (3,455 women; 2,205 men), women had higher rates of discharge to rehab than men (2,251/3,455 [65.2%] vs 1,209/2,205 [54.8%]; p<0.001), while men had higher rates of discharge to home (809/2,205 [36.7%] vs 978/3,455 [28.3%]). Among patients discharged to rehab, SAR utilization was higher among women (2,042/2,251 [90.7%] vs 1,001/1,209 [82.8%]), while AR utilization, inc SCI/TBI, was higher among men (234/1,209 [19.4%] vs 219/2,251 [9.7%]; p<0.001). HLOS was similar between women and men (6 days [IQR 4-8] vs 6 days [IQR 4-10]; p=0.73). After adjustment, women had higher odds of discharge to rehab (OR 1.51, 95% CI 1.35-1.69).

Conclusion: Gender is associated with discharge disposition but not HLOS among older trauma patients. Women were frequently discharged to rehab and men to home, with observed differences in rehab subtype. These findings may inform earlier post-acute care planning.

Gender Differences in Weight-Related Abuse and Weight Concern in a Young Adult Sample

Ayra Shafique[1], Si Woo Chae[1], Abdul Khan[1], Olivia McLeron[1], Hetty Byun[2], Genna Hymowitz[1]

[1]Department of Psychiatry and Behavioral Health, Stony Brook Medicine; [2]Department of Psychology, Stony Brook University

Background: Weight stigma is linked to adverse mental and physical health outcomes. Weight-related abuse (WRA), a form of weight stigma involving verbal or physical victimization, contributes to emotional distress and disordered eating. Prior research suggests women report greater weight dissatisfaction and more experiences of weight stigma than men; however, few studies have evaluated gender differences in WRA or its association with disordered eating.

Objectives: This study examined associations between verbal WRA (v-WRA) and physical WRA (p-WRA) and weight concern after accounting for gender.

Methods: A community sample of 268 adults, including 171 women (Mage = 20.82, SD = 14.01; M BMI = 24.15) and 92 men (Mage = 19.58, SD = 1.80, M BMI = 24.32), completed measures of v-WRA and p-WRAand weight concern (EDE-Q). Hierarchical regression models tested whether v-WRA and p-WRA predicted weight concern and whether these associations remained after accounting for gender. Moderation analyses examined whether gender altered the strength of associations between WRA and weight concern.

Results: Men and women reported similar levels of weight concern, and gender was not a significant predictor (β = -.01, p = .91). Higher levels of v-WRA were associated with greater weight concern (β = .40, p < .001). Although p-WRA was initially associated with increased weight concern, it was no longer a significant predictor (β = .01, p = .82) after accounting for v-WRA. Moderation analyses revealed no significant gender interactions for v-WRA (p = .77) and p-WRA (p = .62), with similar associations by gender.

Conclusion: WRA was associated with greater weight concern, an established precursor to disordered eating, for both men and women. Despite well-documented gender differences in weight stigma experiences, no gender differences emerged in this sample. Future studies should examine gender differences in links between WRA, eating behaviors, and emotional outcomes.

Integrating Psychosocial Risk Assessment and Machine Learning to Improve Prenatal Depression Detection

Tong Chen[1], Heidi Preis[2,3], Marci Lobel[2,3], Petar M. Djurić[1]

[1]Department of Electrical and Computer Engineering, Stony Brook University; [2]Department of Obstetrics, Gynecology & Reproductive Medicine, Stony Brook University; [3]Department of Psychology, Stony Brook University

Background: Prenatal depression is common and linked to adverse maternal and neonatal outcomes, yet it is often under-detected because conventional screening relies on symptom self-report and rarely captures contextual psychosocial vulnerabilities in perinatal mental health. The PROMOTE instrument, a 27-item screening tool designed to assess clinically relevant psychosocial, behavioral, and socioeconomic risks, provides a patient-centered way to collect information not routinely captured in standard prenatal care but essential for identifying vulnerability. Objective(s): To improve early identification of prenatal depression, we applied machine learning models on PROMOTE psychosocial data to quantify individualized depression risk and identify key contextual factors contributing to vulnerability.

Methods: Data from 1715 patients who completed the PROMOTE screening instrument at their first prenatal visit entered the analysis. Tree-based machine learning models used class-balanced data to classify patients as high or low risk for prenatal depression, defined by Edinburgh Postnatal Depression Scale (EPDS) scores of 10. Accuracy, sensitivity, specificity, and F1-score quantified performance. Recursive feature elimination and SHAP identified feature importance.

Results: Random forests achieved the best performance. (Accuracy=0.8, Sensitivity=0.75, Specificity=0.81). High perceived stress, emotional difficulties, limited family or partner support, major life events, unplanned pregnancy, and socioeconomic strain were the most influential predictors. Models also identified patients with vulnerabilities not flagged by EPDS alone.

Conclusions: The combination of PROMOTE's psychosocial assessment with interpretable machine learning facilitates accurate prediction of prenatal depression and reveals modifiable risk factors that might otherwise remain undetected. This approach can enhance screening, guide targeted intervention, and advance precision prenatal mental health care.

Art Installation Abstracts

What is my choice?

Artist: Theda Clesceri, Registered Nurse, Stony Brook University Hospital

Description: A little girl dressed in her school uniform posed and ready for her school day portrait. Woman, innocence, unawareness, ready for guidance or at risk of… One day, this little girl will grow up and become a woman who will be faced with questions of menstruation, contraception, pregnancy and motherhood. The words embroidered on the school uniform: "Society Says: when I grow up, I should be a mother… But what if I don't want to. What is my choice?", foreshadow the questions of the future. The choice of red and blue speaks of the polarizing views surrounding decisions related to pregnancy. The gray of the background serves to remind us that the reasons why women choose to have or not have children are multiple, varied, extremely difficult and sometimes painful. Ultimately, these decisions are up to the woman. This piece was inspired by my time working as a Labor and Delivery Nurse here at Stony Brook University Hospital. It is a reminder that as healthcare professionals our job is to inform, educate and support our patients to participate in their care and make the decisions that are best for them.

Medium: Digital Photography, Mixed Media Sculpture, Textile Garment and Embroidery

Size: 36 in x 48 in

One for Two

Artist: Taka Nah Jelah, Renaissance School of Medicine, Stony Brook University

Description: This piece is inspired by the stigma and self-doubt that many birthing patients experience after procedures such as mastectomies. It reflects the quiet, painful question that often arises: Am I still worthy of motherhood? Can I still nurture, breastfeed, or bring life into this world as I once imagined?

In this artwork, the birthing person carries not just one child, but two, symbolizing abundance, resilience, and the unwavering capacity to give life, even in the absence of both breasts. Their body tells a story of strength: that parenthood is not defined by anatomy only.

Medium: Digital Art

Size: 20 x 20

Pregnancy In A Wheelchair

Artist: Taka Nah Jelah, Renaissance School of Medicine, Stony Brook University

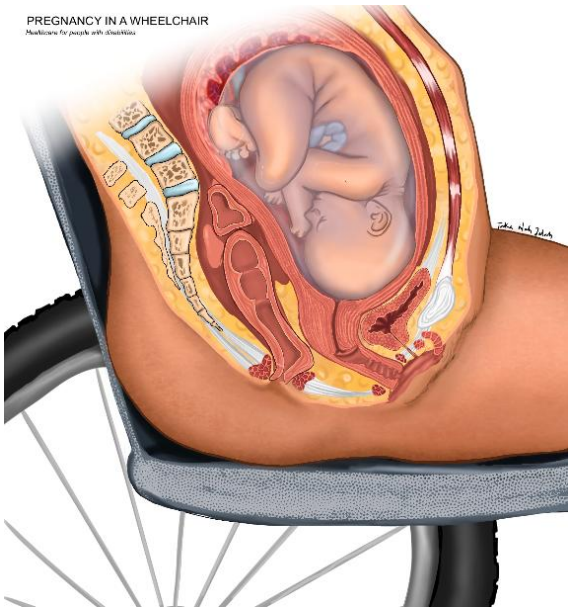
Description: This piece was inspired by the gaps I've noticed in our medical training, especially when it comes to caring for patients with physical disabilities. In all my years of standardized patient encounters, I've never once been presented with a patient who uses a wheelchair, even though these patients exist and deserve thoughtful, competent care.

In this illustration, we see a pregnant person seated in their wheelchair, shown with the same anatomical detail we give every other patient. It's a reminder that disabled bodies are part of the reproductive health landscape, and our training should reflect that.

This artwork is my way of calling attention to what's missing and what our education should include.

Medium: Digital Art

Size: 20 x 20



Guilty Pleasure

Artist: Claire H. Parker, Renaissance School of Medicine, Stony Brook University

Description: This photograph tells a story about a young woman's body image and relationship to food. When I delve into the layers of this photograph, I see a young woman who should be enjoying a cookie but is, for some reason, guilty about it. I imagine the overlay of her torso as a sort of thought bubble. She can't eat a cookie without being bombarded by thoughts of her body and how that cookie will affect it. When she sits up, her stomach rolls. When she lies down her stomach is more 'acceptable' but it still isn't flat. She should lay off the sweets. Nagging guilt robs her of the enjoyment of eating this cookie. The anger in her eyes is directed inward.

Medium: Double exposed color film photograph digitally scanned

Size: 1176 × 810 pixels

Marked by Immunity

Artist: Lauren Mei, Renaissance School of Medicine, Stony Brook University

Description: This piece is inspired by the disproportionate burden of autoimmune disease carried by women. While these illnesses are often invisible, they shape millions of lives, frequently going unrecognized or misunderstood. By highlighting some of the most well-known autoimmune conditions (e.g., SLE and Sjögren's syndrome), this work draws attention to the intersection of biology, gender, and lived experience. It aims to make the unseen visible—inviting viewers to reflect on why women are more vulnerable to these diseases and to acknowledge the resilience of those who live with them every day.

Medium: Digital

Size: 1600 px x 1200 px

Knitting into Being

Artist: Theda Clesceri, Registered Nurse, Stony Brook University Hospital

Description: In continuation with a body of work that has focused on using art and creativity to talk about medical themes. The nine months of pregnancy is expressed through the creation of a knitted garment. The union of sperm and egg leads to the duplication of cells. The knitting project begins with needles and yarn. For both approaches, it is patience, repetition, time and the following of a methodical process that results in the creation of a new life and fully realized knitted garment. Thanks to modern ultrasound technology, pregnant people and medical professionals can visualize what is happening inside the uterus. With this piece I wanted to visually show what things might look like if one could see into the pregnant belly. The internal world of the womb was created using gel printing to represent a colorful, warm and watery world beyond our own. The stark black borders of the rounds differentiate the world outside the womb. The nine months of pregnancy are combined to create a total of five images that depict the growing baby. The maternal hands appear in the prints that correspond with the months in which fetal movement would be felt by the pregnant person. In the final print the perspective is flipped, here the baby looks out of the womb. As the labor and delivery nurse attempts to monitor the fetal heart rate, the baby's hand now appears in silhouette as though it is trying to interact with the outside world that it will soon join.

Medium: Linoleum and Gel Relief Print

Size: 27 in x 92 in

Step Up for Osteoporosis

Artist: Becka Jill Konnayil, Renaissance School of Medicine, Stony Brook University

Description: Step Up for Osteoporosis is a reflective piece that aims to raise awareness of osteoporosis, a condition that often remains invisible until its consequences become life changing. Inspired by the artist's mother's recent diagnosis, the work highlights the hidden nature of the disease, transforming a personal experience into a broader call for understanding, prevention, and action. The piece encourages individuals, communities, and healthcare systems to "Step Up" - to acknowledge the impact of osteoporosis and respond with education, early intervention, and meaningful support. It also seeks to honor those living with osteoporosis, particularly women, whose experiences are too often overlooked or minimized.

Medium: Acrylic on canvas

Size: 16 in x 20 in

Bewilderment

Artist: Michelle Beale, Nurse Educator at Stony Brook Cancer Center

Description: This image represents a woman's mental state as she navigates her way through a cancer diagnosis, treatment and survivorship. As an oncology nurse I have met many women who are recovering and struggle to break away from the stress-inducing fear of the unknown. Scars and alopecia are the physical reminders of the ordeal that women endure following a cancer diagnosis, but the emotional and psychological scars are acknowledged and addressed far less often. Many wounds are invisible.

Medium: Mixed Media (charcoal, watercolor, oil pastel)

Size: 18" x 24"

The Architecture of Fragility: A Heart After SCAD

Artist: Gráinne de Buitléar, Independent Artist

Description: This sculptural work is rooted in my personal experience surviving Spontaneous Coronary Artery Dissection (SCAD), a rare and often misunderstood cause of heart attacks that predominantly affects otherwise healthy women. SCAD occurs when a tear forms within the layers of a coronary artery wall, restricting blood flow and causing a life-threatening cardiac event.

The week of my fiftieth birthday, following years of accumulated emotional stress, I survived a cardiac event that required emergency intervention at Stony Brook Hospital and the placement of multiple stents. Despite classic heart attack symptoms, my condition was initially dismissed by my GP. This delay reflects a broader reality in women's healthcare, where female pain, intuition, and warning signs are frequently minimized or misdiagnosed.

This piece embodies the fragile architecture of the heart—its layered structure, vulnerability to unseen stress, and its capacity to rupture without warning. Using my medical notes incorporated through collage and material, the work examines the tension between structural integrity and failure, highlighting resilience through repair, adaptation, and survival in the aftermath of medical trauma.

Healing is not a return to a former state, but adaptation to a changed internal landscape. This work stands as both a personal narrative and a clinical reflection, intended to raise awareness of SCAD and advocate for recognition of women's cardiovascular health, visibility, and care.

Medium: Sculptural work (collage, mixed materials)

Contact

obgyn.sbresearch@stonybrookmedicine.edu | Conference Website

Thank you for participating in the Inaugural Stony Brook Women's Health Research Conference.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School of Medicine
Stony Brook University