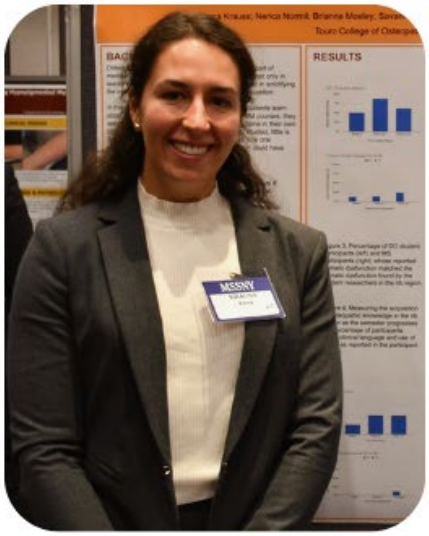
ABSTRACT BOOK

RESIDENT, FELLOW, AND MEDICAL STUDENT POSTER SYMPOSIUM



MSSNY

HOUSE OF DELEGATES
TARRYTOWN, NEW YORK

Supported with a grant from
MESF
MEDICAL, EDUCATIONAL AND SCIENTIFIC FOUNDATION OF NEW YORK STATE

MSSNY Resident, Fellow and Medical Student Poster Symposium
April 4, 2025
Tarrytown Marriott, Tarrytown, New York

JUDGES
(As of date of printing)

Niraj Acharya, MD
Sana Bloch, MD
Sherman Dunn, DO
Alan Kaell, MD
Sandhya Malhotra, MD
Leah McCormack, MD
Lawrence Melniker, MD

Adolph B. Meyer, MD
Daniel Nicoll. MD
Anthony Sgarlato, MD
Matsuko Takeshige, MD
Takeko Takeshige, DO
Peter Wyer, MD

ABSTRACT REVIEWERS

Barbara Berger, MD
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Adolph Meyer, MD
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18th Annual MSSNY Resident/Fellow and Medical Student Poster Symposium
FRIDAY, APRIL 4, 2025

Submission Guidelines

MSSNY Medical Student and Resident/Fellow members are invited to submit abstracts that will be considered for poster presentation.

Please note that medical student membership requires enrollment in a LCME or COCA accredited school. However, non-LCME/COCA students doing rotations in New York hospitals may participate without membership.

Date: Friday, April 4, 2025
Time: 12:00 Noon – 3:00 pm
Location: Tarrytown Marriott, 670 White Plains Road, Tarrytown, NY

The Poster Symposium takes place during the MSSNY House of Delegates Meeting[1]

1. **SUBMISSION RULES**
   a) **You must be a MSSNY member in good standing to participate** (see non-LCME/COCA student exception above). Co-authors are not required to be MSSNY members.
   b) **Non-member first authors must apply for MSSNY membership**. Medical student membership is free. First time resident/fellow membership is free. If you are a former MSSNY resident member, you will have to rejoin and pay your current dues. Residents and students may join online at **http://mymssny.mssny.org**. **PLEASE NOTE YOU MUST JOIN MSSNY AND CREATE AN ACCOUNT BEFORE YOU WILL BE ABLE TO PAY YOUR ENTRY FEE.**
   Thanks to a grant we received from the **MEDICAL, EDUCATIONAL and SCIENTIFIC FOUNDATION OF NEW YORK** we are able to reduce our entry fee to $25. Please note this fee is non-refundable and must be paid prior to **SUBMISSION OF YOUR ABSTRACT**. This fee supports the symposium. Please click this link to submit payment: **https://mymssny.mssny.org/Event.aspx?EventKey=PS2025**
   c) **Check with your Program Director to determine if they will reimburse this fee.**
   d) The DEADLNE for abstract submission is 4 pm on Monday, January 6, 2025.
   e) Abstracts must be scored to be considered for poster presentation. The top 50 resident/fellow and top 20 medical student scores will be invited to present posters in April.
   f) Each applicant may submit only one abstract. You can only be the lead author on one abstract.
   g) Those submitting abstracts for consideration must be the first author of the research.
   h) All submissions must be original works of individuals actively engaged in residency or fellowship training or enrolled in medical school.
   i) Posters previously entered in a MSSNY symposium cannot be resubmitted.
   j) Entries may have been published in abstract form elsewhere but may not be taken from previously published papers. (Authors should also be aware that acceptance at this meeting may preclude an abstract's candidacy for submission elsewhere. It is the author's responsibility to check on this.)

[1] The House of Delegates is an annual meeting during which MSSNY officers, councilors, trustees and designated delegates from county medical societies and recognized specialty societies formulate MSSNY policy and elect officers. Accepted symposium participants who wish to are invited to attend all meeting activities. A Daily Guide will be posted on the MSSNY website **www.mssny.org** as the meeting approaches.

k) Authors of entries accepted for the symposium must be able to attend the meeting and be present to discuss their submissions.
l) All entrants will be notified via e-mail regarding acceptance or rejection of their abstracts as soon as all abstracts have been scored. **MAKE SURE TO PROVIDE A PREFERRED EMAIL ADDRESS THAT YOU LOOK AT! We will use only one email address per participant. Also, please provide the best mailing address to use for you. This should be your home address.**
m) Questions? Email Kathy Rohrer at krohrer@mssny.org or call 516-488-6100 x 396.

2. **ABSTRACT CATEGORIES**
   a) **Resident/Fellows** may submit entries in one of two categories:
      1) ***Clinical Medicine*** includes basic science, quality improvement, health policy, clinical research, and medical education. **Entries in this category are highly encouraged.**
      2) ***Clinical Vignettes*** involve the presentation of one or more patient encounters that illuminate unique observations of a known disease or describe a novel disease process; use of a new procedure, treatment, or medication; medical mysteries; patient, family, and physician relationships; ethical issues. These are expected to include clinical patient information such as history, physical exam, and clinical data, as well as an analysis of how such observations might contribute to existing medical or scientific knowledge.
   b) **Medical Students** may submit abstracts of their scientific research (biochemistry/cell biology, cancer biology, clinical outcomes and healthcare improvement, immunology/infectious disease/inflammation, neurobiology/neuroscience, public health and epidemiology, radiology/imaging, surgery/biomedical engineering); clinical vignettes; or projects based in social sciences and humanities, including alternative methodologies.

3. **ABSTRACT CRITERIA – PLEASE FOLLOW THESE INSTRUCTIONS CAREFULLY**
   a) Submit abstracts as email attachments in MS WORD, 10-point Arial font, to krohrer@mssny.org. **The DEADLINE is Monday, January 6, 2025, at 4 pm.**
   b) The following information must appear at the top of the abstract:
      1. Category (Clinical Medicine or Vignette)
      2. The specialty under which it falls (e.g., Cardiology, Nephrology, Hematology, etc.)
      3. Title
      4. Authors' names
      5. Institution affiliations
      6. As appropriate:
         i. Medical students: entrant's medical school and graduation year
         ii. Residents/Fellows: PG year, expected date of completion of training, and specialty
         iii. For everyone: address and email. **MAKE SURE TO PROVIDE A PREFERRED EMAIL ADDRESS THAT YOU LOOK AT! We will use only one email address per participant.**
   c) Once an abstract is submitted, it cannot be modified (i.e., an updated version will not be accepted later, even before the submission deadline). **Please thoroughly proofread your abstract before submitting it.**
   d) Maximum length for **research** abstract is **250 words**. The maximum length for **a vignette** abstract is **400 words**. Title, authors, and institution affiliations are not included in word count. Do not include captions from photos or graphs in abstract text.
   e) The body of the abstract should include, if applicable, background, methods, results and conclusions. Clinical medicine submissions should include clinical relevance.
   f) Define all abbreviations in the abstract that are exclusive to your institution and not commonly used (to the best of your judgment)
   g) Graphs, figures, and photos should not be included in the submitted abstract, but should be incorporated into the poster for presentation at the meeting.
   h) Authors may submit only one entry to the 2025 symposium.
   i) Abstracts are scored on five criteria, each worth 0 to 5 points, for a maximum score of 25

points. The five criteria are:

1. Importance: innovation, relevance, creativity, new or cutting-edge information, originality of approach/intervention, significance, or interest to the audience.
2. A) Methodology: appropriateness of conceptual basis and design for the identified purpose of the study, appropriateness of data collection techniques, development stage (level of data collection completeness);
   OR B) Lessons Learned: appropriateness of conceptual basis and design for the activity, extent to which the lessons learned merit the conclusions.
3. Clarity: development and communication of ideas and findings.
4. Conclusion consistent with data and/or observations. Potential pitfalls of methodology or interpretation addressed. Potential significance of experiments placed in proper perspective.
5. Abstract is in required form and organized, well written, concise, and readable.

j) MSSNY RFS members may review abstracts submitted by medical students. Reviewing students' abstracts do not disqualify residents/fellows from submitting their own abstracts.
k) Authors will be contacted via e-mail regarding **acceptance or denial** as soon as the abstract committee has made its selections.

4. POSTER PRESENTATION

a) Poster display boards will be provided.
b) Posters must fit within a board area that is approximately 6 feet wide by 5 feet high. (Posters can be smaller, but not larger.) A poster size that works well is 4 feet (48 inches) wide by 3 feet (36 inches) high.
c) Push pins will be provided.
d) Posters should include title, authors, institution affiliations, and a detailed description of methods and results. Graphs, tables, and photos are welcome on posters.
e) Poster text should be in 16-point font or larger.
f) No word count is assigned to poster text, but please limit narrative.
g) Posters will be displayed on boards in a gallery area, where entrants must be present to discuss their submissions.
h) Judges will visit and examine each presentation between 12:00 noon and approximately 3:00 pm. Authors must be available for questions during this time.
i) Between approximately 3:00 and 3:30 pm, participants are invited to circulate and visit each other's posters. You may also do so if you arrive early.
j) All participation costs are the responsibility of the entrants. If you leave your poster behind, MSSNY cannot guarantee its return.

5. JUDGING AND AWARDS

a) Bring an 8 ½" x 11" copy of your poster and hand it in at the registration table – this will be a great aid to the judges as they conduct their final deliberations. **PLEASE WRITE YOUR LAST NAME IN THE UPPER RIGHT CORNER OF THIS COPY.**
b) A panel of poster competition judges will be selected by MSSNY prior to the meeting.
   1. Each judge will assess approximately eight to ten posters.
   2. Each contestant will be visited by at least one, but probably two or more judges.
   3. Judges will be wearing a ribbon on their nametag marked "JUDGE."
   4. Judges will be assigned posters as they arrive at the symposium. They do not all come at once, so the actual start time for each individual's judging will vary. We respectfully request your patience.
   5. Final judging will be done after the symposium. We regret that due to the exigencies of the meeting of which the symposium is a part, we cannot guarantee final results until later in the day or evening. Final results will be emailed to all participants as soon as possible.
c) Authors must be available for questions during the judging and are encouraged to prepare a 5–10-minute oral overview of their posters for the judges as they walk around.

d) Posters will be judged within their category and will be given a final grade, as follows:

CRITERIA: **5** criteria, each worth up to 5 points. Highest score = 25
I. ORIGINALITY: How original is the concept presented in the poster? **OR**, how original is the new approach to an old problem?

2. SIGNIFICANCE: How significant are the poster's conclusions in increasing understanding of a disease process, or in improving the diagnosis or treatment of a disease state, or in disease prevention or health promotion?

3. PRESENTATION: How logical are the ideas presented in the poster? How interesting is the manner of presentation? Was there appropriate use of visual aids and graphics?

4. METHODS: How suitable is the research design for the stated objectives, and how appropriate are any statistical techniques applied? **For case vignettes**, are sound scientific principles used in analysis/interpretation/discussion?

5. INTERVIEW: How knowledgeable and conversant is the presenting author with the research presented in the poster?

e) **Residents/Fellows:** There will be up to three awards for each category: First Place, Second Place and Honorable Mention. Vignettes may have, in addition, a Third-Place category.

f) **Students:** There will be up to three awards in the student category: First Place, Second Place and Honorable Mention. The judges reserve the right, depending on submissions, to divide student posters into vignettes and clinical research, and award prizes accordingly.

g) Winners will receive an award certificate. We hope to be able to give First and Second Place winners a monetary award. All poster contestants will receive a certificate of participation.

Please be aware that by attending MSSNY's Poster Symposium and/or MSSNY's House of Delegates meeting, you consent to your name and/or your likeness being used without compensation in all media, and you release MSSNY, its successors, assigns and licensees from any liability of any nature.

S U B M I S S I O N S

Medical Students

Poster #	FirstName	Last Name	School	Title	E-Mail	Page
1.	Sophia	Gerberg	Ponce Health Sciences University, MD Candidate 2026	Sex-Based Disparities in Adherence to Lung-Protective Ventilation Strategies in Emergency Departments: A Multi-Center Retrospective Cohort Study	sgerberg22@stu.psm.edu	12
2.	Eric	Bao	Renaissance School of Medicine Stonybrook, MD Candidate 2025	Transmasculine Facial Masculinization Outcomes and Complications: A Case Series	ebao@northwell.edu	12
3.	Steven	Medvedovsky	SUNY Downstate Health Sciences University, MD Candidate 2026	Outcomes After Coronary Artery Bypass Grafting in Elderly Patients with Preoperative Cognitive Decline	steven.medvedovsky@downstate.edu	13
4.	Emily	Dai	SUNY Downstate Health Sciences University, MD Candidate 2027	A Pilot Study of the Effects of Provocations on Korotkoff Sound Characteristics	emily.dai@downstate.edu	13
5.	Alisha	Daroch	CUNY School of Medicine, MD Candidate 2026	Severe Limb Ischemia After Dialysis Access Intervention	alishadaroch@gmail.com	14
6.	Hailey	Yung	CUNY School of Medicine, MD Candidate 2026	Surgical Resection as a Key to Long-Term Disease Control in Metastatic Pancreatic Acinar Cell Carcinoma	hung000@citymail.cuny.edu	14
7.	Stephanie	Rothberg	Donald and Barbara Zucker School of Medicine at Hofstra University/Northwell, MD Candidate 2027	First- and Second-Year Medical Student Perceptions of Virtual Reality as a Teaching Tool for Suturing	srothberg@northwell.edu	15
8.	Jared	Bassett	Donald and Barbara Zucker School of Medicine at Hofstra University/Northwell, MD Candidate 2027	Incorporation of Intraoperative Confocal Laser Endomicroscopy into the Routine Workflow of Brain Surgery	jbassett1@pride.hofstra.edu	15
9.	Bianca	Chandler	Donald and Barbara Zucker School of Medicine at Hofstra University/Northwell, MD Candidate 2027	Caregiver Voices: Improving Transitions to Adulthood for Youth with Autism and/or Intellectual Disability	bchandler2@northwell.edu	16
10.	Puru	Sadh	Donald and Barbara Zucker School of Medicine at Hofstra University/Northwell, MD Candidate 2026	Determining the Necessity of Preoperative Dental Clearance Prior to Total Joint Arthroplasty	sadhpuru4@gmail.com	16
11.	Noel	Tomy	New York Medical College, School of Medicine, MD Candidate 2027	Reconstruction of Complex Multi-Subunit Nasal Defects: A Case Study on Functional and Aesthetic Restoration	ntomy@student.nymc.edu	17
12.	Joanna	Tao	New York Medical College, School of Medicine, MD Candidate 2027	Understanding the Literature of Music and Ketamine Therapies in Treatment-Resistant Depression	jtao4@student.touro.edu	17
13.	Alyssa	Lee	New York Medical College, School of Medicine, MD Candidate 2027	Safety and Efficacy of Staged Endovascular Treatment of Anterior Cerebral Artery Aneurysms Using Coiling Followed by Flow Diversions	alee49@student.nymc.edu	18

Poster #	FirstName	Last Name	School	Title	E-Mail	Page
14.	Atieh	Ashkezari	New York Institute of Technology College of Osteopathic Medicine, DO Candidate 2026	Exploring the Impact of Teaching Assistants on Student Learning in Osteopathic Manipulative Medicine (OMM) Laboratory Session: A Survey Study	adehgh02@nyit.edu	18
15.	Saba	Iqbal	New York Institute of Technology College of Osteopathic Medicine, DO Candidate 2026	A Case Report: Rare Idiosyncratic Reaction of Acute Drug Induced Hepatotoxicity in the Setting of Long-Term Metronidazole, Aztreonam, and Vancomycin Use	siqbal@nyit.edu	19
16.	Kaylee	Bressler	New York Institute of Technology College of Osteopathic Medicine, DO Candidate 2026	Geotemporal Analysis of Pedestrians Struck During the COVID-19 Pandemic at a NYC Trauma Center	kbressle@nyit.edu	19
17.	Muzammil	Siddiqui	New York Institute of Technology College of Osteopathic Medicine, DO Candidate 2026	A Case Report: Rare Case of Chyle Leak Status Post Robotic Assisted Cholecystectomy	msiddi15@nyit.edu	20
18.	Abigail	Wolf	New York Institute of Technology College of Osteopathic Medicine, DO Candidate 2027	A Comparison of Surface Topography Structure to Tissue Function in Mouse Model Colitis	awolf02@nyit.edu	20
19.	Anushka	Bhatt	New York Institute of Technology College of Osteopathic Medicine, DO Candidate 2026	Time-Dependent Autophagy Flux and Cell Death Responses in Cardiomyocytes Treated with Doxorubicin	abhatt08@nyit.edu	21
20.	Melissa	Ikizoglu	New York Institute of Technology College of Osteopathic Medicine, DO Candidate 2026	Unveiling the Impact of Vitamin C Deficiency in Pediatric Anesthesia: A Case Series and Comprehensive Literature Review	mikizogl@nyit.edu	21
21.	Shani	Kahan	New York Institute of Technology College of Osteopathic Medicine, DO Candidate 2026	Novel Treatment for Broncho Constrictive Diseases: Control of Airway Smooth Muscle Cells by Gelsolin	shani13k@gmail.com	22
22.	Zachary	Chanmin	New York Institute of Technology College of Osteopathic Medicine, DO Candidate 2026	Pseudoaneurysm of Following Shoulder Arthroscopy	zchanmin@nyit.edu	22
23.	Kayinat	Sundas	New York Institute of Technology College of Osteopathic Medicine, DO Candidate 2026	Consequences of Not Using Incentive Spirometry	ksundas@nyit.edu	23
24.	Oluwasegun	Odukoya	Touro College of Osteopathic Medicine, DO Candidate 2026	Spontaneous Pneumomediastinum: A Case Report Highlighting the Role of Respiratory Infections in Pathogenesis	oodukoya@student.touro.edu	23
25.	Jenny	Lu	Touro College of Osteopathic Medicine, DO Candidate 2026	Manipulating Wellness: Exploring Osteopathic Manipulative Treatment's Role in Managing NAFLD and NASH	jlu14@student.touro.edu	24

Poster #	FirstName	Last Name	School	Title	E-Mail	Page
26.	Ian	Andrews	Touro College of Osteopathic Medicine, DO Candidate 2026	An Atypical Case of Aspergillosis	iandrews@student.touro.edu	24
27.	Shivani	Padhi	Touro College of Osteopathic Medicine, DO Candidate 2027	Investigating the Emotional Impact of Death and Dying on Medical Students: A Single Center Study	spadhi@student.touro.edu	25
28.	Jennifer	Rose	Touro College of Osteopathic Medicine, DO Candidate 2025	A Case of Viral Cardiomyopathy – A Perfect Storm?	jrose13@student.touro.edu	25

Residents/Fellows - Clinical Medicine

NO.	FirstName	LastName	Des	Title	E-Mail	Program	Page
29.	Andrej	Sodoma	DO	Incidence of Etiology of Hepatocellular Carcinoma by Social Determinants of Health, A Trend From 2016-2021	asodoma@northwell.edu	PGY-2 South Shore University Hospital, Internal Medicine	26
30.	Christopher	Katchis	MD	Analyzing the Impact of TKA Femoral Flexion Angle on Range of Motion	ckatchis@northwell.edu	PGY-1 Lenox Hill Hospital, Orthopaedic Surgery	26
31.	Arany	Uthayakumar	MD	Interpersonal Dependency and Its Relationship with Interpersonal Problems and Psychological Health and Well-Being	authayakumar@northwell.edu	PGY-1 Mather Hospital Northwell Health, Psychiatry	27
32.	Xiao	Yuan	MD	Construct Validity of the SPECTRA's Cognitive Concerns Scale: Relationships with DSM-5 Level 1 Scales and PID-5-BF Assessing Cancer Worry in Patients Who are Being Screened for Breast Cancer	xyuan@northwell.edu	PGY-2 Mather Hospital Northwell Health, Psychiatry	27
33.	Terence	Jao	MD	Impact of Higher Phototherapy Threshold for Jaundice Guidelines in Healthy Infants Born ≥35 Weeks on Readmissions in an Urban Multiethnic Community Hospital	terencejoan@gmail.com	PGY-3 Flushing Medical Center, Pediatrics	28
34.	Han	Bae	MD	Relative Age and Attention-Deficit/Hyperactivity Disorder in an Urban Multiethnic Developmental-Behavioral Clinic in New York State	hanseobbae1@gmail.com	PGY-3 Flushing Medical Center, Pediatrics	28

Residents/Fellows - Vignettes

	FirstName	LastName	Des	Vignette Spec	Title	E-Mail	Program	Page
35.	Julian	Willett	MD	Anatomic Pathology	A Rare Case of Multistem Langerhans Cell Histiocytosis and Cutaneous Extramedullary Hematopoiesis in a Newborn Presenting as Blueberry Muffin Baby Syndrome	julian.d.willett@gmail.com	PGY-1 New York Presbyterian – Weill Cornell Medical Center, Pathology	29
36.	Saira	Iqbal	MD	Infectious Diseases	Malaria on the Move: A Case Series from Brooklyn, New York	sairqbal@maimonidesmed.org	PGY-2 Maimonides Medical Center, Infectious Diseases	29
37.	Hana	Andrlova	MD	Hematology	Remarkable Recovery from TAFRO Syndrome with Severe Renal Thrombotic Microangiopathy After Treatment with Eculizumab, Corticosteroids, Siltuximab and Rituximab	hana.andrlova@mountsinai.org	PGY-1 Icahn School of Medicine at Mount Sinai, Internal Medicine	30
38.	Jennifer	Cushman	MD	Interventional Pain Management	Rare Obstetrical Complication of Paresthesia and Lower Extremity Pain in an L5 Dermatomal Distribution	jen.cushman@gmail.com	PGY-5 St. Elizabeth Hospital Medical Center, Pain Management	30

POSTER # 1

Sex-Based Disparities in Adherence to Lung-Protective Ventilation Strategies in Emergency Departments: A Multi-Center Retrospective Cohort Study

Sarah Gilman, DO1, Daniel Rolston, MD, MSHPM1, Margaret Gorman, MS2, Sophia Gerberg, BA3 sgerberg22@stu.psm.edu, Douglas P. Barnaby, MD, MSc, MBA1,2

1Department of Emergency Medicine, Donald and Barbara Zucker School of Medicine at Hofstra/Northwell, Manhasset, NY PGY2, 2026 2Feinstein Institutes for Medical Research, Manhasset, NY 3Ponce Health Sciences University, Ponce, PR Third Year Medical Student 2026

BACKGROUND: Low tidal volume ventilation (LTVV) guidelines are well-established, yet evidence suggests sex-based disparities in adherence. This study investigated whether women were less likely to receive LTVV compared to men in emergency departments (EDs).

METHODS: We conducted a retrospective cohort study across 17 EDs within a single health system. Patients ≥18 years of age intubated and mechanically ventilated in the ED were included. The primary outcome was adherence to LTVV (≤8 mL/kg predicted body weight). A logistic regression model assessed the association between sex and LTVV adherence, adjusting for height, facility type, shift time, and ED length of stay.

RESULTS: Among 2,357 patients, 91% of men received LTVV compared to 59% of women. After adjusting for confounders, including height, men were significantly more likely to receive LTVV than women (adjusted OR: 1.4, 95% CI: 1.1–1.9). Taller patients (adjusted OR: 1.2, 95% CI: 1.2-1.2), and those treated at tertiary hospitals (adjusted OR: 1.5, 95% CI: 1.1-1.7) were also more likely to receive LTVV.

CONCLUSIONS: A sex-based disparity in LTVV adherence persists, even after adjusting for height and other confounders. This underscores the need for targeted interventions to ensure equitable, evidence-based care in emergency settings.

POSTER # 2

Transmasculine Facial Masculinization Outcomes and Complications: A Case Series

Eric Bao BS[1] ebao@northwell.edu, Stephanie Rothberg BA[2], Sydney Barone[3] Nicholas Bastidas MD[1]

Division of Plastic and Reconstructive Surgery, Northwell Health; Donald & Barbara Zucker School of Medicine at Hofstra University/Northwell; Lewis Katz School of Medicine at Temple University

INTRODUCTION: Facial masculinization surgery (FMS) is a set of procedures, typically mandible angle, chin, and tracheal augmentation, for transmasculine patients. This study assesses outcomes in 7 transmasculine patients who have undergone FMS using poly (ether-ether ketone) (PEEK) implants.

METHODS: A retrospective review for transmasculine patients who received FMS from January 2024 to December 2024 was conducted. Patient characteristics such as demographic information, medical history, and intra-operative complications were analyzed.

RESULTS: The study includes 7 transmasculine patients with an average age at surgery of 30.7 ± 5.0 years. Two patients had prior facial surgery, of which one patient had a prior facial masculinizing surgery with mandible angle and chin augmentation, and the other had facial liposuction. A total of 15 procedures were performed, with the multi-procedures occurring in a single operation for each patient. Every patient had mandible augmentation, while only 3 patients had chin augmentation and 3 had Adam's apple enhancement. Additionally, 1 patient had platysmaplasty and another patient had jowls liposuction. Two patients had postoperative complications. One patient, who did not take post-operative antibiotics, had a chin abscess that was treated with drainage and antibiotics. The second patient had a left mandible abscess that required debridement surgery 86 days following the primary surgery. Five of the patients were on hormone replacement therapy at the time of the surgery, with an average duration of 57.6 ± 41.5 months.

CONCLUSION: FMS may have high rates of post-operative infection. Patient education pre-operatively and proper post-operative follow-up can help mitigate these risks.

POSTER # 3

Outcomes after Coronary Artery Bypass Grafting in Elderly Patients with Preoperative Cognitive Decline

Steven Medvedovsky, BA[1]steven.medvedovsky@downstate.edu, Sherene E. Sharath, PhD, MPH[1], Aitua C. Salami, MD, MPH[2], Panos Kougias, MD, MSc[1]

Institution affiliations: [1]Department of Surgery, SUNY Downstate Health Sciences University; [2]Department of Cardiovascular and Thoracic Surgery, UT Southwestern Medical Center

BACKGROUND: Individuals with cognitive decline represent a growing share of surgical patients, yet their outcomes after coronary artery bypass grafting (CABG), the most common major surgery, remain undefined. We examined the association between preoperative dementia and postoperative outcomes in elderly CABG patients.

METHODS: In this retrospective multicenter cohort study, we identified patients aged ≥65 years undergoing CABG in the National Inpatient Sample using International Classification of Diseases codes. Outcomes included in-hospital mortality, complications, length of stay (LOS), and discharge disposition. Logistic and linear regressions adjusted for demographics, comorbidities, facility, admission, and operative characteristics.

RESULTS: From 1998-2021, 667,801 CABG operations were identified: 3,988 (0.6%) in patients with dementia and 663,813 (99.4%) without. Patients with dementia were older (76.4 vs. 73.3 years), had higher Elixhauser comorbidity index (1.4 vs. 0.7), longer LOS (11.4 vs. 10.0 days), and more extended care discharges (84.6% vs. 58.9%; all p<0.001). Adjusted models associated dementia with increased LOS (+0.4 days [95% CI, 0.16-0.64]), extended care discharges (adjusted odds ratio [aOR] 2.28 [95% CI, 2.07-2.52]), delirium (aOR 3.30 [95% CI, 2.93-3.71]), and urinary tract infections (UTIs) (aOR 1.26 [95% CI, 1.13-1.42]) but lower mortality (aOR 0.66 [95% CI, 0.53-0.83]), acute kidney injury (AKI) (aOR 0.77 [95% CI, 0.70-0.86]), and respiratory failure (aOR 0.81 [95% CI, 0.72-0.92]; all p<0.001).

CONCLUSIONS: Dementia was associated with prolonged LOS and greater care needs following CABG. Observed lower mortality, AKI, and respiratory failure odds may reflect selection bias, as higher-risk dementia patients may not undergo surgery. Clinicians should prioritize preventing delirium and UTIs while facilitating safe discharge.

POSTER # 4

A Pilot Study of the Effects of Provocations on Korotkoff Sound Characteristics

Emily Dai BS emily.dai@downstate.edu; Louis Salciccioli MD; John Carter PhD; Jason Lazar MD, MPH
Institution affiliation: SUNY Downstate, Class of 2027

BACKGROUND: Korotkoff sounds (KS) are routinely used to measure blood pressure. While prior research explored their potential to provide insight into cardiovascular function, limited data exists comparing KS characteristics across various provocations. This study aims to investigate the relationship between KS characteristics and different provocations that impact the ventriculo-arterial coupling system.

METHODS: A prospective cohort study of 18 healthy subjects was conducted. KS were recorded for 1 minute (at diastolic + 20 mmHg) using an electronic stethoscope at rest and with 3 provocations: leg elevation, handgrip, lower extremity cycle. Peak KS frequency (analyzed using 3 methods: single pulse, spectrum analyzer, single analyzer) and bandwidth were measured using MATLAB.

RESULTS: The mean age of the 18 participants was 27.5 ± 6.3 years, with 44.4% female and 66.6% male. The average BMI of the cohort was 23.9 ± 3.1 kg/m². The mean resting KS frequency was 54.38 ± 5.17 Hz and was similar across all three frequency measurement methods (p= 0.78). The mean resting bandwidth was 36.56 ± 14.42 Hz. Neither KS peak frequency (p= 0.74) or bandwidth (p= 0.78) changed significantly from baseline with provocations.

CONCLUSION: These results suggest that KS can be recorded and analyzed for frequency by several methods yielding similar results, and for bandwidth. While KS frequency and bandwidth may be relatively stable across various provocations, further investigation is warranted to understand the relationship between KS and other physiological parameters, such as vascular and surrounding tissue properties, to explore their potential as indicators of patient health.

POSTER # 5

Severe Limb Ischemia After Dialysis Access Intervention

Daroch AK, Whitaker L, Paci S, Sandowski-Pizow S, Etkin Y
Institution Affiliation: Northwell Health
Medical School: CUNY School of Medicine, MD Candidate 2026
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BACKGROUND: Arteriovenous fistulas (AVF) are commonly preferred for vascular access in end stage renal disease (ESRD) patients on hemodialysis (HD) due to their longer durability and better patient outcomes. However, stenosis is a common complication. Endovascular stent placement is generally safe to maintain patency, however, serious complications including stent infection, migration, fracture, and erosion are still possible. Erosion is particularly rare and can lead to restenosis. We present a case of venous stent erosion causing acute limb ischemia in a patient with an arteriovenous fistula for dialysis.

CASE PRESENTATION: A 71-year-old female with ESRD on HD via right radiocephalic AVF presented with worsening right-handed numbness and pain. She had a history of persistent AVF dysfunction. Upon examination, her right hand had weakened grip, diminished sensation, rest pain, and absent pulses. Imaging revealed that while her AVF remained patent, flow was severely decreased. Significant stenosis was also seen in the brachial artery due to erosion of a previously placed stent within the brachial vein. Additionally, thrombosis of the dominant distal radial artery was evident due to an inappropriately placed stent graft across the arterial anastomosis and flow through the ulnar and interosseous arteries was diminished, suggesting lack of collateral circulation. Based on the workup, the patient was concluded to have severe limb ischemia due to diminished blood flow caused by significant stenosis of the brachial artery and radial artery occlusion, compounded by inadequate collateral circulation.

MANAGEMENT/OUTCOME: Surgical intervention included bypass graft repair for the brachial artery and AVF ligation for the thrombosed radial artery. At one-month post-op, duplex ultrasound (DUS) confirmed a patient bypass graft without stenosis. Patient's dialysis access was maintained through a right chest wall tunneled dialysis catheter.

CONCLUSION: Stent erosion can cause restenosis and needs prompt intervention. When combined with radial artery thrombosis, the risk of acute limb ischemia increases, particularly for patients with radial artery dominance or absent palmar arch continuity. A thorough pre-procedural assessment, including the Allen's test, should be routine before any hemodialysis procedure to evaluate for collateral circulation and decrease risk of complications. This low-cost, non-invasive measure can help influence decision making and improve overall outcomes in HD access management.

POSTER # 6

Surgical Resection as a Key to Long-Term Disease Control in Metastatic Pancreatic Acinar Cell Carcinoma

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BACKGROUND: Pancreatic acinar cell carcinoma (PACC) is a rare form of pancreatic cancer, accounting for only 1-2% of all pancreatic malignancies. The tumor predominantly arises in the pancreatic head. Surgical resection is the primary treatment for localized PACC, offering the best chance for long-term survival. However, no standardized guidelines exist for adjuvant therapy following surgery, with treatment often tailored to individual patients. Approximately half of PACC cases present with metastatic disease at diagnosis, which frequently involve the regional lymph nodes and liver. This complicates the role of surgery in metastatic PACC, which remains a subject of debate.
CASE PRESENTATION: We report a 61-year-old male who presented in February 2021 with intermittent abdominal pain associated with alcohol consumption. A computed tomography (CT) scan revealed a hypodense lesion in the pancreatic head with pancreatic duct dilation, a lesion in the left hepatic lobe, and multiple non-enlarged peripancreatic lymph nodes suggestive of malignancy. A positron emission tomography-computed tomography (PET/CT) scan identified a 3.3 x 2.7 cm mass in the pancreatic uncinate process, a 4.8 cm lesion in the left hepatic segment (segment II), and a 2.6 x 1.6 cm peripancreatic lymph node. The patient's carbohydrate antigen 19-9 (CA 19-9) level was normal. Histopathological examination confirmed the diagnosis of PACC (stage IV), revealing a densely cellular neoplasm with prominent nucleoli, a high mitotic rate (up to 36 mitoses per 210 high-power fields), a Ki-67 proliferation index exceeding 90%, and evidence of lymphovascular invasion.
SURGICAL MANAGEMENT & RESULT: The patient underwent extensive surgery, including diagnostic laparoscopy, intraoperative hepatic ultrasonography, segmental hepatectomy, gastrojejunostomy, and a pancreaticoduodenectomy (Whipple procedure). The Whipple procedure entailed resection of the pancreatic head, duodenum, gallbladder, common bile duct, and part of the stomach. The hepatic metastasis was addressed through segmental hepatectomy of the left liver lobe. Postoperative genetic testing revealed a pathogenic BRCA2 mutation, prompting the initiation of maintenance therapy with Olaparib (Lynparza).
CONCLUSIONS & SIGNIFICANCE: This case underscores the potential benefits of early surgical management in metastatic PACC, particularly in patients with genetic mutations such as BRCA2 and solitary liver lesions. It highlights the need to consider surgery as a first-line treatment strategy in such cases. When combined with targeted therapies like Olaparib, this approach may improve outcomes. While the average survival time for metastatic PACC is 19.6 months, our patient's disease-free survival of over 40 months emphasizes the success of a surgical-predominant multidisciplinary approach in managing rare pancreatic cancers.

POSTER # 7

First- and Second-Year Medical Student Perceptions of Virtual Reality as a Teaching Tool for Suturing

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INTRODUCTION: Virtual reality (VR) immerses the user in a 3D video. VR confers greater surgical knowledge and technique for residents compared to 2D videos. This study seeks to understand medical student perceptions of VR as a suturing teaching tool.

METHODS: All preclinical students at the Donald and Barbara Zucker School of Medicine were invited to participate. Ten MS1s and nine MS2s were randomly selected. Nine students were randomized into the VR cohort, and 10 into the 2D cohort. Each student watched the following videos: Introduction to Surgical Tools, Knot Tying, Simple Interrupted, Baseball, and Subcuticular and performed these stitches on a cadaver.

RESULTS: Suturing confidence, measured from 1-5 with 5 being the most confident, significantly increased in both cohorts (VR p=0.000, 2D p=0.002), with a larger increase from VR. The video helpfulness was similarly measured from 1-5 and demonstrated the VR videos were more helpful than 2D (p=0.06), with 56% (N=5) of VR students rating a 5, compared to only 20% (N=2) of 2D students. Simple interruption was easiest for most students (VR N=8, 2D N=6). The remaining students found the baseball easiest. Most students (VR N=8, 2D N=6) found the subcuticular the most challenging. All students would use videos to study if available. Twenty-one percent (N=4) would only use VR, 26% (N=5) would only use 2D, and 53% (N=10) would use both.

CONCLUSION: Both modalities improve suturing confidence, with VR providing more benefit. VR was more helpful, suggesting increased access may bolster confidence and preparation for surgical clerkships.

POSTER # 8

Incorporation of Intraoperative Confocal Laser Endomicroscopy into the Routine Workflow of Brain Surgery

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BACKGROUND: Intraoperative confocal laser endomicroscopy (CLE) helps distinguish tumor tissue from normal brain parenchyma. We demonstrate the feasibility of incorporating CLE as a routine part of brain tumor surgery.

METHODS: A prospective study is underway to evaluate the use of CLE during brain tumor surgery. The CLE probe (Convivo, Carl Zeiss Meditec AG) was introduced in the surgical field to acquire images at various stages of resection. This was followed by a real-time neuropathology assessment of tissue characteristics using a telepathology software platform (Zeiss Convivo In Vivo Pathology Suite). CLE was employed alongside planned surgical technique.

RESULTS: The CLE system was employed as a co-diagnostic tool in six cases at our institution. Recurrent glioblastoma was the most common histopathological diagnosis. Two cases involved minimally invasive approaches, one via an endoscopic transsphenoidal route for a sellar lesion, and one using a tubular retractor for a periventricular WHO-grade 4 glioblastoma. For all transcranial approaches, intraoperative ultrasound was used. The surgical microscope was used in three cases, and the exoscope was used in two cases. CLE was used during two 5-ALA fluorescence-guided resections. Intraoperative neurophysiological monitoring, including somatosensory evoked potentials (SSEPs), was employed in all cases. Integration of CLE alongside standard operating procedures and tools was seamless without modifying the planned surgical workflow.

CONCLUSIONS: CLE can be readily adapted into the standard neurosurgical workflow for patients with brain tumors without major procedural modifications, including in microscopic, endoscopic, and minimally invasive tubular approaches. With easy integration, CLE may improve surgical outcomes and diagnostic efficiency.

POSTER # 9

Caregiver Voices: Improving Transitions to Adulthood for Youth with Autism and/or Intellectual Disability

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BACKGROUND: Transition to adulthood is complicated for adolescents and young adults with autism and/or intellectual disability (AYAAID) and their caregivers. Caregivers of AYAAID face challenges related to caring for their child through adulthood and tend to be socioeconomically disadvantaged. The transition literature has explored the caregiver experience among youth with special health care needs, but few have focused on AYAAID. Furthermore, specific barriers to transition have yet to be studied in New York State (NYS).

METHODS: A qualitative study was designed to explore the experience of caregivers of AYAAID in NYS. Participants were recruited from a community support organization, Parent to Parent of NYS. Eligible participants self-identified as caregivers to a formally diagnosed AYAAID aged 16-24. They were randomly assigned to a 1-hour focus group conducted via virtual audio-visual meetings. Qualitative thematic analysis was performed by two researchers to identify the most common barriers to transition in NYS. A third researcher adjudicated any discrepancies.

RESULTS: Eighteen participants consented to the study. Participants represented 5 regions across NYS, including two upstate regions (n=8) and three downstate regions (n=10). The most common barriers identified were the negative impact of the transition process on the caregiver and child, difficulties navigating complex educational and health systems, inadequate care coordination to support caregivers, and disappointment in medical providers who lack the knowledge and time to help facilitate transition.

CONCLUSIONS: Caregivers of AYAAID in NYS experience barriers in the transition process related to systems, accountability, health care delivery, and poor mental health. Limitations include participants' membership in a community support organization and exclusion of caregivers with non-English language preference.

POSTER # 10

Determining the Necessity of Preoperative Dental Clearance Prior To Total Joint Arthroplasty

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INTRODUCTION: Prosthetic joint infections (PJIs) are devastating complications of total joint arthroplasty (TJA). While antibiotic prophylaxis for postoperative total joint patients undergoing invasive dental procedures is well established, the need for preoperative dental clearance before total joint arthroplasty remains controversial.

METHODS: We retrospectively reviewed 410 patients undergoing primary total knee (TKA = 205) or hip arthroplasty (THA = 205) for osteoarthritis. All patients underwent preoperative dental clearance within six months of surgery. Dental evaluations by board-certified dentists identified active dental infections (ADI), symptoms, treatment modalities, and relevant dental histories.

RESULTS: Of 410 patients, 5.4% (n=22) had an ADI, all asymptomatic. Treatments included extraction (64%, n=14), extraction plus antibiotics (14%, n=3), and crown replacement (5%, n=1); some required no intervention. Dental clearance averaged 11 days (SD 20 days; range 0–76). No PJIs occurred within 90 days postoperatively in patients with treated ADIs, though two PJIs were noted in those without ADIs. No surgical site infections occurred in either group. Statistical analysis revealed no differences in length of stay, patient disposition, 90-day readmissions, or PJIs. Notably, among patients with active infections 77%(n=17) had a history of ADI and 9%(n=2) had loose teeth.

CONCLUSION: The 5.4% incidence of asymptomatic ADIs emphasizes the importance of preoperative dental clearance. While no statistical differences in PJI outcomes were found, this was a result of appropriate inter-disciplinary preoperative management. Dental clearance is strongly recommended for patients with prior ADIs or loose teeth. Appropriately treated ADIs should not preclude patients in receiving TJAs.

POSTER # 11

Reconstruction of Complex Multi-Subunit Nasal Defects: A Case Study on Functional and Aesthetic Restoration

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BACKGROUND: Reconstructing extensive nasal defects involving multiple subunits poses unique challenges in achieving functional and aesthetic restoration. A 60-year-old female presented with a 5-year history of infiltrative basal cell carcinoma (BCC) requiring seven Mohs surgery stages. Mohs Micrographic Surgery (MMS) is widely recognized as a gold-standard treatment for high-risk facial nonmelanoma skin cancers due to its high cure rates (Bichakjian et al., 2018). The complexity of the defect requires using an innovative approach to the subunit principle of repair to accomplish both a functional and aesthetic outcome (Burget & Menick, 1985).

METHODS: Reconstruction utilized the subunit principle to address aesthetic and functional goals. A bipedicle mucosal flap was employed for the internal nasal lining, minimizing bulk and preserving nasal function. Structural support was achieved with a scaphoid cartilage graft. External coverage was performed using a paramedian forehead flap designed to match nasal skin characteristics. Surgical steps included excision to delineate subunits, advancement of the medial cheek, and sequential integration of internal and external flaps.

RESULTS: The multi-stage reconstruction provided robust nasal support and patency. The forehead flap's vascularity allowed for aggressive thinning and minimized scarring. At 6 months, the patient demonstrated restored nasal function, well-defined subunit contours, and negligible scarring.

CONCLUSION: Adhering to the subunit principle and employing innovative reconstructive techniques optimized functional and aesthetic outcomes. The combination of bipedicle mucosal flaps and paramedian forehead flaps underscores their efficacy in complex nasal defect repairs.

CLINICAL RELEVANCE: This case highlights advanced reconstructive techniques to guide clinicians in addressing large nasal defects while balancing functionality and aesthetics. Studies have shown that Mohs Micrographic Surgery ensures high cure rates and facilitates the precise excision needed to preserve as much healthy tissue as possible, reducing reconstructive challenges (Smeets et al., 2004).

POSTER # 12

Understanding the Literature of Music and Ketamine Therapies in Treatment-Resistant Depression

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BACKGROUND: Ketamine-assisted psychotherapy is a novel interventional treatment for treatment-resistant depression. Simultaneously, there is growing interest in understanding and applying music therapy to neuropsychiatric treatment. To assess the state of the field, we investigated literature discussing simultaneous use of music therapy with psychedelic-assisted psychiatric treatments, particularly ketamine.

METHODS: With a multidisciplinary working group including psychiatrists, music therapists and others with experiences in music and psychedelic treatments, we established notable authors in the fields. The importance of these works was verified using graphical representations of their references and citations, which were then followed further.

RESULTS: In reviewing the literature, we found this field is disconnected and compartmentalized within institutions and authors. This is partly because of how new these fields are: formal research into using ketamine and music therapy to explore consciousness began in the 1960s. Since then, clinical use and acceptance of these therapies has grown. Additionally, the field's interdisciplinary nature and differing frameworks between music therapists and physicians has also contributed to the literature's fractured nature. Finally, previous studies on ketamine and/or music therapy have lacked consistency.

CONCLUSIONS: By delineating these gaps in the literature, this project guides the development of future clinical studies, particularly those with access to both music therapists and ketamine for treatment of neuropsychiatric patients. While music therapy and psychedelic treatments individually have significant potential, the literature and its gaps indicate they have more potential when combined, and it will require interdisciplinary teams and studies to fully examine and utilize these treatments together.

POSTER # 13

Safety and Efficacy of Staged Endovascular Treatment of Anterior Cerebral Artery and Anterior Communicating Artery Aneurysms Using Coiling followed by Flow Diversion

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BACKGROUND: Multimodal endovascular therapy, combining staged coiling with pipeline flow diversion, shows promise for managing ruptured intracranial aneurysms. While increasingly popular for their safety and efficacy, endovascular techniques are less studied in anterior communicating artery (Acomm) aneurysms. This study retrospectively analyzed radiographic and clinical outcomes of Acomm/ACA aneurysm patients with subarachnoid hemorrhage treated at Westchester Medical Center.

METHODS: 16 patients treated at Westchester Medical Center from 2017 to 2024 were included in this study. Inclusion criteria required patients to present with ruptured Acomm/ACA aneurysms initially managed with coils followed by flow diversion after rupture or recurrence. Data collected included age, gender, aneurysm size, coil type, number of flow-diverters, and clinical and radiographic outcomes. Aneurysm resolution and non-recurrence following staged endovascular treatment defined ultimate cure. Radiographic imaging was used to determine aneurysm location and size before and after treatment.

RESULTS: The median age was 50, with an equal sex distribution. Median aneurysm size was 5 mm. 14 of 16 patients (87.5%) achieved aneurysm resolution without recurrence. One patient had residual aneurysm protection, and another suffered a periprocedural complication (6.25%) with moderate neurological injury. Two patients experienced long-term in-stent stenosis requiring dual antiplatelet therapy (12.5%). Follow-up data were available for 14 patients, with one death unrelated to the aneurysm and one missed appointment.

CONCLUSIONS: This study highlights the efficacy and safety of staged coiling with flow diversion for ruptured Accom/ACA aneurysms. With high cure rates and low complications, this technique offers a promising alternative to clipping, warranting further validation through larger studies.

POSTER # 14

Exploring the Impact of Teaching Assistants on Student Learning in Osteopathic Manipulative Medicine (OMM) Laboratory Session: A Survey Study

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BACKGROUND:
Osteopathic Manipulative Medicine (OMM) is a hands-on treatment approach used by osteopathic physicians to diagnose, treat, and prevent illnesses through physical manipulation of the body. It is a cornerstone of osteopathic medical education, requiring effective methods to teach psychomotor skills. Teaching assistants (TAs) may enhance learning by providing near-peer instruction and adapting strategies to various learning styles. We hypothesize that TAs positively impact student understanding, confidence, and mastery of OMM techniques.

METHODS:
A survey assessed first-year osteopathic students' perceptions of TAs in OMM labs. The anonymous survey, administered using a Likert scale, was emailed to 320 students, with responses collected from 5/21/24-6/13/24. Positive response rates were reported with 95% confidence intervals (CIs).

RESULTS:
Of 113 responses, 95% of students reported that TAs improved their understanding of OMM techniques (95% CI: 91.0%–99.0%). Additionally, 74% stated that TAs offered alternative explanations that clarified concepts (95% CI: 66.0%–82.0%), and 72% felt more confident performing OMM skills after interacting with TAs (95% CI: 64.0%–80.0%). Moreover, 43% preferred asking TAs questions over faculty (95% CI: 34.0%–52.0%).

CONCLUSION: TAs significantly enhance student learning, understanding, and confidence in OMM, underscoring the value of near-peer teaching in psychomotor skills courses. Further studies are warranted to explore factors underlying TA effectiveness and their application in other procedural education contexts.

POSTER # 15

A Case Report: Rare Idiosyncratic Reaction of Acute Drug Induced Hepatotoxicity in the Setting of Long-Term Metronidazole, Aztreonam, and Vancomycin Use

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INTRODUCTION: Drug-induced liver injury (DILI) is a significant cause of acute liver dysfunction, responsible for 14% of acute liver failure cases and a leading indication for liver transplantation in the U.S. It results from direct toxicity or idiosyncratic reactions influenced by genetic, immunological, and metabolic factors. Antibiotics, particularly metronidazole, vancomycin, and aztreonam, account for 45% of DILI cases. Vancomycin, used for MRSA infections, rarely causes hepatotoxicity but may lead to elevated liver enzymes, jaundice, and Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS), which can progress to liver failure. Metronidazole-induced hepatotoxicity usually presents as cholestatic injury, and aztreonam is associated with rare hepatic damage. Risk factors for DILI include prolonged drug exposure, advanced age, and genetic or immune factors.

CASE PRESENTATION: A 64-year-old female with past medical history of hypertension, hyperlipidemia, type II diabetes mellitus, and peripheral arterial disease (PAD), presented to emergency department with a one-week history of fatigue, myalgias, generalized weakness, and diarrhea, following prolonged antibiotic use for osteomyelitis after a distal phalanx amputation two months earlier. At that time, to treat the infection she had received a three-week intravenous course of metronidazole, vancomycin, and aztreonam via a peripherally inserted central catheter (PICC) line. She later developed a diffuse rash, swelling, eosinophilia (peak of 17.4%), and suspected DRESS, thereby treated with prednisone and Benadryl. Three weeks post-treatment, her symptoms recurred, with diarrhea, skin peeling, and worsening liver function. Lab tests revealed elevated creatinine (3.69 mg/dL), direct and indirect bilirubin (16.7 mg/dL and 22 mg/dL), AST (peak of 758 U/L) and ALT (peak of 637 U/L), alongside positive cytoplasmic antineutrophil cytoplasmic antibody (c-ANCA), anti-smooth muscle antibodies (ASMA), and low complement component C3 and C4, indicating immune complex disease.

CLINICAL RELEVANCE: The patient's condition involved acute kidney injury (AKI), suspected drug-induced interstitial nephritis, and hepatocellular injury, suggestive of immune-mediated liver damage mimicking autoimmune hepatitis. Despite steroid treatment, the patient's liver dysfunction progressed, with up-trending LFTs and a high MELD score. She was transferred for higher-level care, including hepatology evaluation and biopsies, resources not available at our current facility. DILI may require corticosteroids and drug discontinuation, with outcomes ranging from recovery to liver failure. This case underscores the complexity of diagnosing DILI, especially when comorbidities and immune-mediated mechanisms are involved. It highlights the diagnostic and therapeutic challenges of rare drug reactions and emphasizes the need for vigilance, timely intervention, and multidisciplinary care in complex cases.

POSTER # 16

Geotemporal Analysis of Pedestrians Struck During the COVID-19 Pandemic at a NYC Trauma Center

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INTRODUCTION:
The stay-at home orders put in place during the COVID-19 pandemic greatly reduced pedestrian activity, however the number of pedestrian stuck accidents persisted. Geotemporal mapping is a tool that has been used to study these incidents and help shape injury prevention plans. This study evaluates a NYC level II trauma center to analyze the demographics and Geotemporal patterns of pedestrian struck patients throughout the pandemic.

METHODS:
A retrospective study of 3,001patients identified 317 pedestrian struck injuries, of which 247 had corresponding location data. Pandemic cohorts were PreCOVID (2019, N=57), COVID (2020, N=67), 1yrPostCOVID (2021, N=79), and 2yrsPostCOVID (2022, N=44). Data was analyzed using SPSS Statistics v27 with $p<0.05$ indicating significance. Kernel density estimation (KDE) was done using ArcGIS to determine Geotemporal locations with highest density.

RESULTS:
Pedestrian struck traumas did not significantly change throughout the pandemic. Demographic analysis showed that Black Non-Hispanic patients significantly increased from PreCOVID to 1yrPostCOVID [21(36.8%) vs 43(54.4%)]. Kernel density analysis revealed smaller more confined clusters of incidents during COVID compared to all other time periods. 1yrPostCOVID shows just one distinct cluster compared to three distinct clusters in PreCOVID and COVID. This cluster then shifted and became more spread out during 2yrsPostCOVID.

CONCLUSION:
The locations of incidents became more condensed during COVID and then expanded back out in the years after but did not return to PreCOVID patterns. The use of kernel density estimation to analyze incident location density is a useful tool that can be used to shape injury prevention and road traffic changes for the future.

POSTER # 17

A Case Report: Rare Case of Chyle Leak Status Post Robotic Assisted Cholecystectomy

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INTRODUCTION: A robotic-assisted cholecystectomy (RAC) is a minimally invasive procedure for removal of the gallbladder. Common complications include bile duct injury, sepsis and intestinal obstruction [1]. One rare postoperative complication of cholecystectomy is a chyle leak, having only eight reported cases. It carries significant morbidity and thus requires prompt diagnosis and treatment [2]. With there being no current cases in literature, this report presents possibly the first RAC-associated chyle leak and discusses its associated history, findings, and treatment.

CASE DESCRIPTION: 65-year-old male presents to the emergency department roughly six days after an elective robotic assisted cholecystectomy (RAC) with severe abdominal pain, nausea, vomiting, and unable to keep anything down post-op. The patient was admitted to the hospital and was found to be in diabetic ketoacidosis associated with his history of Type 2 Diabetes Mellitus, requiring intensive care unit management. The patient underwent computerized tomography of abdomen and pelvis (CTAP), which illustrated bilateral pleural effusions as well as a large complex fluid collection in the gallbladder fossa despite the presence of a drain, raising concern for bile leak or abscess. In preparation of further workup, a nuclear medicine HIDA scan was performed to evaluate for the presence of a bile leak, which was negative. Previous studies indicate that chyle leak can be identified by triglyceride count greater than 110mg/dL collected by the drain or by serum to drain triglyceride ratio [3]. A CTAP scan was used to track the size of the abscess and the drain triglyceride content, which was found to be 127 mg/dL confirming suspicion for a chyle leak, an exceptionally rare complication of laparoscopic cholecystectomy and even more so for RAC.

DISCUSSION: The therapeutic goals outlined in current literature aligned with our treatment plan, with a focus on limiting lymphatic flow and replenishing lost nutrients, primarily through dietary adjustments (total parenteral nutrition (TPN) and a low-fat, high-protein diet) and pharmacological treatments [4]. Moreover, as opposed to TPN alone, combining octreotide with TPN has been shown to shorten the time required for drain removal [5]. If typical non-operative management is unsuccessful, treatment utilizing interventional radiology by ligation of the thoracic duct can be an alternative. In summary, studying chyle leak in patients after robotic-assisted cholecystectomy is essential for preventing complications, ensuring proper recovery, and refining surgical techniques to minimize risk in future procedures.

POSTER # 18

A Comparison of Surface Topography Structure to Tissue Function in Mouse Model of Colitis

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BACKGROUND:
This study explores how epithelial barrier structure and function are affected in the dextran sodium sulfate (DSS)-induced colitis model. It aims to analyze the relationship between morphological changes visualized by surface topography and tissue function data.

METHODS:
A double-blind approach was used to compare 5 healthy mice to 5 DSS-exposed mice. DSS exposure induces colitis by breaking down the epithelial barrier. Sections of midcolon from each mouse were placed in the Ussing chamber to assess paracellular permeability and conductance. Cell-impermeable dye was used to measure dye translocation across tissues. Dye was added to the mucosal side and samples were taken from serosal side in 20-minute intervals. They were analyzed using a spectrophotometer. For conductance analysis, electrodes measured change in voltage with applied 5 μA current. Images of distal colon sections were taken at 20x and 50x magnification using the S Neox SensoSCAN. The 20x stitched images were analyzed using SensoMap Advanced Analysis software, looking at coverage (%) and pore density (particles/mm^2).

RESULTS/CONCLUSION:
Surface topography data showed no significant difference in pore density between the two groups (Student's T-test with Welch's Correction, p=0.9388). There was a decrease in crypt coverage in DSS mice by about 60% (p=0.1871). A significantly non-zero positive slope (p=0.0265) with an R squared value of 0.9983 (Goodness of Fit test) was calculated in comparison of % of crypt coverage to normalized permeability in DSS mice. This suggests that while the number of crypts was comparable between groups, DSS crypts were smaller and leakier than the control.

POSTER # 19

Time-Dependent Autophagy Flux and Cell Death Responses in Cardiomyocytes Treated with Doxorubicin

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BACKGROUND:
Doxorubicin (DOX), an anthracycline-based chemotherapeutic agent, is widely used in cancer treatment. However, its use is limited by cardiotoxicity. While the precise mechanisms underlying DOX-induced cardiotoxicity are not fully understood, they are believed to be multifactorial, involving dysregulation of autophagy, a catabolic process responsible for degrading and recycling cellular components. The impact of DOX on autophagic activity and the role of autophagy in mediating DOX cardiotoxicity remain highly controversial.

OBJECTIVE:
To determine the optimal duration of DOX treatment that affects autophagic flux in human cardiomyocytes (AC16) and to investigate the correlation between autophagy and DOX-induced cell death.

METHODS:
Cardiomyocytes were seeded three days before DOX treatment, which began at 5 p.m., followed by doses every 2 hours from 9 a.m. to 3 p.m. the next day. Cells were harvested at 5 p.m., with Pepstatin A (PepA) and E64d added 8 hours prior. Western blot analysis used a 10% gel with antibodies against LC3B, cleaved caspase 3, PARP, and beta-actin. Band intensity was measured to assess autophagic flux and cell health.

RESULTS:
During autophagy, LC3-I converts to LC3-II, correlating with the number of autophagosome and serving as a marker for autophagic activity. DOX increased LC3-II levels at all time points, further elevated by PepA and E64d, indicating accelerated autophagic flux. DOX also elevated cleaved caspase 3 and PARP levels, suggesting enhanced apoptosis.

CONCLUSION:
Doxorubicin-treated cells exhibit a gradual increase in autophagy flux and cell death over a 24-hour period. Further investigation is required to clarify the role of autophagy in DOX-induced cardiomyocyte death.

POSTER # 20

Unveiling the Impact of Vitamin C Deficiency in Pediatric Anesthesia: A Case Series and Comprehensive Literature Review

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BACKGROUND: Scurvy has reemerged as a critical concern in children with autism spectrum disorder (ASD) and restrictive diets, where unrecognized vitamin C deficiency (VCD) can lead to severe perioperative complications, including pulmonary hypertension (PH) crises, cardiac arrest, and airway bleeding.

METHODS: A PubMed review identified five pediatric case reports on VCD-related complications during general anesthesia. These cases were evaluated for clinical presentation, contributing factors, anesthetic challenges, and outcomes. Additionally, a comprehensive analysis examined the systemic effects and pathophysiological mechanisms of scurvy.

RESULTS: All cases involved male children undergoing diagnostic procedures, presenting with vascular abnormalities and non-weightbearing status or unstable gait. Perioperative complications included PH crises, cardiac arrest, hemodynamic instability, and airway bleeding. Common risk factors were ASD and restrictive diets, though VCD was only recognized post-complication. Administration of vitamin C effectively reversed cardiovascular dysfunction in all cases, often in conjunction with vasodilators. Literature analysis revealed that VCD disrupts nitric oxide pathways, endothelial integrity, and vascular stability.

CONCLUSIONS: Severe VCD significantly heightens perioperative cardiopulmonary risks but is preventable through early detection and intervention. Routine nutritional screening in high-risk populations, especially children with ASD and restrictive diets, is essential. While findings are based on retrospective data, they underscore the urgent need for prospective research. Anesthesiologists and specialists should proactively assess dietary habits and address deficiencies to enhance patient safety.

SIGNIFICANCE: This study highlights the imperative need for routine nutritional assessments and early intervention to prevent life-threatening perioperative complications, offering practical strategies to protect vulnerable pediatric populations.

POSTER # 21

Novel Treatment for Broncho Constrictive Diseases: Control of Airway Smooth Muscle Cells by Gelsolin

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Asthma, a chronic bronchoconstrictive respiratory condition affects approximately 300 million people worldwide (*Sciencedirect*). Current asthma treatments, such as beta agonists and steroids, do not suffice in controlling as many as approximately 38.4% of children and 50% of adults (CDC). There is an unfulfilled need for enhanced bronchoconstrictive therapies. In this project, a novel mechanism was explored to treat bronchoconstriction. This approach involves modifying airway smooth muscle (ASM) construction utilizing PIP2 binding peptide, Gelsolin.

Release of stored intracellular calcium stimulates many critical neuronal processes such as ASM constriction (https://www.ncbi.nlm.nih.gov/pubmed/20626318). Rhodamine tagged Gelsonin prevents PIP2 from hydrolyzing to IP3, thereby preventing calcium release. We therefore hypothesize that the Gelsolin peptide will trigger less ASM constriction. Additionally, research has shown that the caffeine-sensitive intracellular pools involve distinct pathways than from well-known IP3 gated pools. Hence, we also hypothesize that Gelsolin would not affect caffeine-induced constriction as opposed to methacholine-induced constriction (MIC). This approach was tested using c57 mice lung slices and Video Savant and Origin Software were used for the observation and analysis of ASM movements.

Several experiments were conducted to test the hypotheses, which were supported by the results. Gelsolin caused significant ASM relaxation in models representing both pre-existing MIC and Gelsolin pretreatment on MIC. Furthermore, results showed that Gelsolin had no effect on caffeine-induced constriction, demonstrating that caffeine-induced constriction works on a different pathway than MIC. The project findings support the hypotheses that Gelsolin reduces ASM constriction by working on the PIP2 pathway.

POSTER # 22

Pseudoaneurysm Following Shoulder Arthroscopy

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INTRODUCTION: Shoulder arthroscopy is a minimally invasive surgical method for repair of various joint pathology. Complications rates have previously been found to be between 4.6 and 10.6%, depending on surgical experience, indication, and technique.[1] Vascular injury following elective orthopaedic surgery is not a common postoperative complication, with a prevenance of 0.005%; pseudoaneurysms making up 11% of these injuries.[2] We present the case of an posterior circumflex artery pseudoaneurysm following arthroscopic shoulder surgery.

CASE REPORT: A 38-year-old male presented to our clinic complaining of right shoulder and neck pain after being involved in a motor vehicle accident. The patient failed conservative management with physical therapy prior to presentation. MRI of the right shoulder demonstrated a tear of the anterior superior labrum with an associated small effusion. The patient underwent arthroscopy of the right shoulder without any immediate postoperative complications.

Seven days postoperatively, the patient presented to the emergency department complaining of severe right shoulder pain. A CT scan revealed a 3.5cm pseudoaneurysm of the posterior circumflex humeral artery. The patient was then transferred to a different hospital capable of vascular intervention where he underwent an ultrasound guided thrombin injection of the pseudoaneurysm. The patient tolerated the injection and thrombosis of the aneurysm was achieved. The patient reported resolution of shoulder pain and was able to engage in a post operative course of physical therapy. His only current complaint is residual right shoulder stiffness.

DISCUSSION: Pseudoaneurysm following shoulder arthroscopy is a rare complication, however, orthopaedic surgeons should be aware of it to ensure that it is correctly diagnosed and appropriately treated.

POSTER # 23

Consequences of Not Using Incentive Spirometry

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CONTEXT/BACKGROUND:
Most residents admitted to the emergency department due to traumas and rib fractures are scheduled for physiotherapy to help improve the thoracic volume of inspired air (Dote et al., 2020). For respiratory physiotherapy in many patients with chest trauma and rib fractures, an incentive spirometry device is widely used that is designed to motivate the patients to get the maximum number of inspiratory volumes through visually aided feedback. Incentive spirometry is a device that is neither invasive nor expensive (Dote et al., 2020). The first report that showed incentive spirometry to reduce pulmonary complications was given by Bartlett et al., along with other studies that investigated the uses of incentive spirometry (Dote et al., 2020). The residents in the facility where the project is implemented primarily are post-acute care and post-surgical care on a long-term basis, and they don't use incentive spirometry most of the time due to laziness and forgetfulness. Most of them are hospitalized in the emergency department after being admitted to long-term care due to the pulmonary complications they develop. They must know the benefits and importance of using incentive spirometry daily for 15 minutes every 2 hours. This paper discusses this issue along with the strategies to implement the use of incentive spirometry.

METHODS:
The materials used in this strategy to implement incentive spirometry were digital posters that showed the use and importance of incentive spirometry. Such techniques were used for the residents because most of the residents in the facility are 65-90 years old, and most of them learn through visual teaching through videos and posters. Besides using the materials, collaboration was set up with the nurse assistants and staff nurses. They would positively reinforce residents to use incentive spirometry 15 minutes every 2 hours through daily reminders. Residents were made easier to use incentive spirometry by demonstrating their use in front of them.

RESULTS:
Upon evaluation, it was found that only 17 out of the 25 residents could use incentive spirometry regularly for 15 minutes every 2 hours, while the remaining ones skipped it or were not adhering to its usage due to laziness or forgetfulness. The things that worked well during this project were the teaching methods and materials used: videos and posters, along with an in-person demonstration of using incentive spirometry. However, the things that did not work were not having enough time to get all the residents to use incentive spirometry and not having enough residents to have much more robust data.

POSTER # 24

Spontaneous Pneumomediastinum: A Case Report Highlighting the Role of Respiratory Infections in Pathogenesis

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BACKGROUND: Spontaneous pneumomediastinum (SPM) is an uncommon and self-limiting condition characterized by the presence of air in the mediastinum without apparent trauma. While often associated with activities that increase intrathoracic pressure, such as vomiting or intense exertion, underlying respiratory infections and excessive coughing play a critical role in its pathogenesis. Extreme coughing can generate high airway pressures, potentially causing micro-perforations in the glottis, leading to air escape into the mediastinum.

CASE PRESENTATION: We present the case of a 20-year-old male college athlete with a history of asthma, and recent upper respiratory tract infection who developed acute onset chest pain and dyspnea following episodes of severe coughing after lifting weights. Physical examination revealed crepitus subcutaneous emphysema over the supraclavicular region, and imaging confirmed pneumomediastinum without evidence of esophageal or tracheal injury. The patient was treated conservatively with oxygen therapy, analgesics, and resolution of the underlying respiratory infection using supportive care. Symptoms resolved within a week.

DISCUSSION: This case highlights the importance of early diagnosis and management of respiratory infections, as untreated infections can precipitate excessive coughing and result in SPM. The pathophysiology involves increased intrathoracic pressure and micro-perforations at sites of anatomical weakness, such as the glottis. Identifying and treating the underlying infection is crucial to preventing recurrence and complications. Conservative management remains the mainstay of treatment for uncomplicated SPM, but patients require close monitoring to ensure recovery and to rule out secondary infections or structural damage.

CONCLUSION: This report emphasizes the critical role of addressing respiratory infections in patients presenting with SPM. Recognition of the link between excessive coughing, glottic micro-perforations, and pneumomediastinum is essential for preventing recurrence and optimizing patient outcomes.

POSTER # 25

Manipulating Wellness: Exploring Osteopathic Manipulative Treatment's Role in Managing NAFLD and NASH

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BACKGROUND:
Non-Alcoholic Fatty Liver Disease (NAFLD) and Non-Alcoholic Steatohepatitis (NASH) are escalating global health issues, often leading to liver dysfunction, fibrosis, and in severe cases, hepatocellular carcinoma. Current management relies heavily on lifestyle modifications and pharmacologic interventions, which may have variable effectiveness. Osteopathic manipulative treatment (OMT) offers a novel, complementary approach by improving thoracoabdominal mobility, circulation, and overall physiological function. This review investigates the theoretical and clinical evidence supporting OMT as a potential adjunct in managing NAFLD and NASH.

METHODS:
A comprehensive literature review was conducted to examine studies evaluating OMT techniques and their effects on thoracoabdominal motion and related physiological mechanisms. The review emphasized techniques such as diaphragmatic release, rib raising, and thoracic spine mobilization, which are known to enhance venous return, lymphatic drainage, and systemic circulation. These mechanisms were evaluated for their potential impact on liver health in patients with NAFLD and NASH.

RESULTS:
OMT has shown promise in improving diaphragmatic function and circulation, which may reduce hepatic congestion, enhance liver perfusion, and decrease systemic inflammation. Although direct evidence linking OMT to liver-specific outcomes in NAFLD and NASH is limited, the physiological rationale is strongly supported by studies on OMT's broader effects on thoracoabdominal function.

CONCLUSION:
OMT appears to be a promising adjunct in the management of NAFLD and NASH. Further clinical research is necessary to validate its efficacy and to establish its role within multidisciplinary liver disease care.

POSTER # 26

An Atypical Case of Aspergillosis

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Pulmonary aspergillosis (PA) encompasses a diverse spectrum of conditions caused by Aspergillus species, ranging from allergic bronchopulmonary aspergillosis to invasive pulmonary aspergillosis (IPA). This case report highlights an atypical presentation of IPA in a 79-year-old male with a complex medical history, including coronary artery disease, atrial fibrillation, congestive heart failure, and diabetes, His medications on admission included amiodarone, aspirin, ezetimibe, furosemide, metformin and metoprolol. The patient presented with acute hypoxic respiratory failure following worsening shortness of breath and leg swelling post-coronary artery bypass surgery.

Initial investigations revealed bilateral pleural effusions and diffuse alveolar-interstitial infiltrates on chest X-ray. CT imaging was suggestive of fluid overload rather than an infectious etiology. Diagnostic imaging failed to identify hallmark radiographic features such pulmonary nodules, Halo sign or air crescent sign. Laboratory testing demonstrated leukocytosis, neutrophilia, eosinophils within normal limits, elevated BNP and a negative viral and respiratory panel. However, further workup, including Aspergillus antigen testing, confirmed the diagnosis of invasive aspergillosis.

The patient was started on intravenous voriconazole at 300 mg twice daily, tailored to clinical improvement and continued for a total duration of 12 weeks per guideline recommendations. Management also included high flow nasal cannula at 100% FIO2 for hypoxia, adjunctive therapy with prednisone for volume overload and the discontinuation of amiodarone to prevent drug-induced lung injury. The patient's care was coordinated across infectious disease, cardiology, and pulmonology specialties, emphasizing the importance of multidisciplinary collaboration in managing complex cases.

This report underscores the diagnostic challenges of PA, particularly in immunocompromised or post-surgical patients, where overlapping symptoms with other pulmonary conditions can delay recognition and treatment. Early and accurate diagnosis is critical, requiring a combination of advanced imaging, serologic testing, and blood cultures. Moreover, timely initiation of antifungal therapy with agents such as voriconazole is pivotal in improving outcomes.
In conclusion, this case demonstrates that aspergillosis can present without the typical radiologic signs or laboratory results (neutropenia or immunosuppression) while being masked by symptoms from other pathologies such as fluid overload or COPD. It highlights the role of personalized, multidisciplinary approaches in optimizing care, mitigating complications, and reducing healthcare costs associated with delayed or misdiagnosis. Future efforts should aim to enhance diagnostic tools and therapeutic strategies to address antifungal resistance and improve the prognosis for patients with pulmonary aspergillosis.

POSTER # 27

Investigating the Emotional Impact of Death and Dying on Medical Students: A Single Center Study

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Death is inevitable to experience in the clinical setting. In nearly every field, a medical professional will encounter the emotional impact that comes alongside this experience. Medical students experience this early, starting in Cadaver lab. Dissection of cadavers can often lead to emotional distress, given a lack of preparation and resources. We recognize this and its association to the sequela of grief, identifying this as a gap within medical education.

A Qualtrics survey was emailed to students at three Touro College of Osteopathic Medicine campuses. The survey contained a total of twenty-four questions, sent to Master's and D.O students. A total of 178 responses were comparatively analyzed utilizing the Stats iQ feature in Qualtrics. 67.6% of students who felt unprepared to witness death in the clinical setting were interested in a 1-hour grief counseling webinar ($p= 0.00256$). Results suggest cadaver lab alone was not sufficient in adequately preparing students for coping with death ($p= 0.0336$). 10.9% of students receiving physician support following patient death were still thinking about the event 1 month later, compared to 20.7% of students who received no support.

Medical students' perspectives are often overlooked when investigating the effect of death in the clinical setting. The results unveiled that support is essential, but anatomy lab preparation is not sufficient, and a webinar may serve as an enhancement in medical education. Our data has the potential to be extrapolated to improve students' readiness for handling death and dying in the clinical setting.

POSTER # 28

A Case of Viral Cardiomyopathy – A Perfect Storm?

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Cardiotropic viruses, uncontrolled hypertension, and alcohol are known to negatively impact the heart and can each independently lead to long-term cardiac damage. A 39-year-old man with history of chronic alcohol abuse and uncontrolled hypertension presented initially for upper respiratory infection (URI) symptoms. One month later, he continued to have URI symptoms and was found to be in acute heart failure with an ejection fraction of <20%. Heart failure management was initiated, and an extensive viral and infectious disease workup was completed with inconclusive results. Cardiac workup was negative for ischemia, but echocardiogram did reveal left ventricular global hypokinesis, diastolic dysfunction in addition to mitral and tricuspid regurgitation with moderate pulmonary hypertension. He was admitted twice over the next 4 months for pneumonia in the setting of acute on chronic heart failure with reduced ejection fraction (HFrEF) once meeting sepsis criteria. While the viral etiology remains unknown despite extensive workup, it is proposed that the resultant heart failure was precipitated by the underlying damage caused by the patient's comorbidities. Due to the timing of his decompensation, his heart failure was presumed to be resultant of the precipitating viral illness, rather than the result of his comorbidities alone.

Due to the inflammatory reaction that accompanies viruses, hypertension, and alcohol, mediating modifiable risk factors may be able to prevent long-term damage. Additional education at both the provider and patient level should be focused on cardiac sequelae of common viruses, and encouragement of better control of modifiable risk factors. It is possible that this could lead to better medical management and early intervention—both preventing negative outcomes.

This case poses the question of a relationship between risk of long-term damage from cardiotropic viruses in the setting of underlying chronic inflammation as well if patients with underlying chronic inflammation are more at risk for the negative impacts of cardiotropic viruses.

POSTER # 29

Incidence of Etiology of Hepatocellular Carcinoma by Social Determinants of Health, A Trend From 2016-2021

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Hepatocellular carcinoma (HCC) is the most common type of primary liver cancer in adults and the third leading cause of cancer-related deaths worldwide. The mortality rate of HCC has increased and is projected to continue to rise. Cirrhosis remains the predominant cause of HCC. In this study, we used the National Inpatient Sample (NIS) from 2016-2021 to trend changes in the etiologies of HCC. The International Classification of Disease (ICD) 10 codes were used to identify patients with cirrhosis, HCC, and the leading causes of cirrhosis: Hepatitis B (Hep B), Hepatitis C (Hep C), alcohol use disorder (AUD), and MAFLD. The patients were analyzed for baseline characteristics. A weighted total of 108,795 HCC patients from 2017-2021, with 7615 Hep B, 39765 Hep C, 16625 AUD, and 8745 MAFLD patients, were analyzed. Viral causes steadily decreased (Hep B: 8.04% 2016, 7.81% 2017, 6.44% 2018, 6.5% 2019, 6.94% 2020, 6.23% 2021 ($p < 0.0011$); Hep C: 45.19% 2016, 39.63% 2017, 39.6% 2018, 34.43% 2019, 31.24% 2020, 28.08% 2021 ($p < 0.0001$)). AUD remained relatively lateral (16.8% 2016, 14.46% 2017, 17.19% 2018, 14.54% 2019, 14.19% 2020, 14.38% 2021 ($p < 0.0024$)). MAFLD doubled (5.87% 2016, 6.66% 2017, 7.42% 2018, 9.78% 2019, 8.48% 2020, 10.19% 2021). The rates of HCC are directly related to the changes in rates of cirrhosis etiology supported by the increase in MAFLD and the decrease in the percentage of patients with Hep B and C. This study's methodology provides a transparent and reliable approach to understanding the trends in HCC etiology.

POSTER # 30

Analyzing the Impact of TKA Femoral Flexion Angle on Range of Motion

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INTRODUCTION: Femoral implant flexion angle (FF) is an underutilized metric with wide reported ranges. Increased understanding of FF use may establish specific sagittal alignment targets.

METHODS: Demographics, knee range of motion (ROM), and implant alignment parameters were collected for total knee arthroplasty (TKA) patients using a CT-based robotic system. Patients were grouped by FF: “High-FF” (>4°) and “Low-FF” (≤4°). ROM was measured once preoperatively and postoperatively at 7-42, 43-135, and >136 days. ROM comparisons were performed across groups.

RESULTS: The study included 976 patients (mean age: 66.3±8.7 years, BMI: 32.9±10.9, 56.6% female). Mean FF was 4.04°±2.1° [range: 0°-9°]. High-FF patients were more often female (62.5% vs. 53.0%, p=0.006), with smaller femoral (68.7% vs. 52.2%, p<0.001) and tibial implants (63.9% vs. 50.1%, p<0.001), lower tibial slope (3.0° vs. 3.2°, p<0.001), and more cemented implants (20.4% vs. 14.4%, p=0.020). No significant ROM differences were observed between groups preoperatively or at any postoperative timepoint. 193 patients had a measurement in all four windows.

CONCLUSION: The FF angle did not impact ROM. Patients receiving an FF angle above 4° were more often female, cemented, had lower tibial slope angle, and smaller femur and tibia implant sizes. This study gives orthopedic surgeons a framework to optimize surgical planning for a patient population that will continue to become more diverse and varied. This allows for an individualized and patient-centered approach to TKA which has shown to increase patient satisfaction and reduce patient morbidity along with hospital costs.

POSTER # 31

Interpersonal Dependency and Its Relationship with Interpersonal Problems and Psychological Health and Well-Being

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BACKGROUND: Interpersonal dependency includes overdependence, detachment, and health dependency (Bornstein 2011). Our analysis explored how self-reported ratings of interpersonal dependency were related to measures of interpersonal problems and psychological health with adolescent inpatients.

METHODS: Adolescent patients were asked to complete a packet of measures at admission to an acute inpatient adolescent psychiatry unit. This included the Relationships Profile Test (RPT; Bornstein & Languirand, 2003)-a self-report measure of interpersonal dependency, the Inventory of Interpersonal Problems-32 (IIP-32; Horowitz et al. 2003) a measure of interpersonal problems, and the Schwartz Outcome Scale-10 (SOS-10; Blais et al. 1999) a measure of psychological health and well-being.

RESULTS: 154 adolescents consented to participate although not all completed all of the measures. The average age was 15.92 (SD=1.10, range 13-17) and the sample consisted of 51.3% females (79/154) with an ethnicity including 44.2% Caucasian, 31.8% African American, 16.9% Hispanic/Latino, 2.6% Asian, and 4.5% as “other.” We found that the RPTs scales of destructive overdependency and dysfunctional detachment were positively correlated with the IIP-32’s overall interpersonal problem score. We also found that destructive overdependency and dysfunctional detachment were negatively correlated with SOS-10 scores of psychological health and well-being and RPTs scale of healthy dependency was positively correlated with scores of psychological health and well-being.

CONCLUSIONS: Pathological dependence was related to increased reporting of interpersonal problems and poorer ratings of psychological health and well-being. These findings help to understand when treating adolescents, a key developmental period, on an acute inpatient unit where they are interacting with other patients.

POSTER # 32

Construct validity of the SPECTRA’s cognitive concerns scale: Relationships with DSM-5 Level 1 scales and PID-5-BF

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BACKGROUND: Assessing cognitive problems is important when seeing psychiatric patients as it may pertain to the symptoms and symptom severity. Having a valid scale to assess for this can assist clinicians in referrals for further neurological assessment. In this analysis, we investigated the construct validity of the SPECTRA’s cognitive concern scale.

METHODS: We consented psychiatric outpatients who completed a packet of questionnaires while they were waiting for their appointment. They completed the SPECTRA: Indices of Psychopathology (Blais & Sinclair, 2018), a brief, broadband 96-item, self-administered, multiscale measure of psychopathology and functioning, DSM-5 Cross-Cutting Level 1 Measure (APA, 2013), a 23-item self-report measure that assesses 13 psychiatric domains, and the Personality Inventory for DSM-5-Brief Form (PID-5-BF, APA, 2013), a 25-item self-rated personality trait assessment scale for adults age 18 or older.

RESULTS: 116 patients consented and completed the packet. 69.6% were female (1 did not answer) and the majority (81.9%) were Caucasian. The average age was 39.7 9SD=16.7). We found that SPECTRA’s scale of cognitive concern was positively correlated with DSM-5 Cross Cutting-Level 1 scales of memory problems (r=.54, p<.001), sleep problems (r=.35, p<.001) and the PID-5-BF scales of psychoticism (r=.50, p<.001) and disinhibition (r=.45, p<.001). Cognitive concerns scale was not related to the SPECTRA’s psychosis scale (r=-.07, ns) or the DSM-5-Cross Cutting Level 1 psychosis scale (r=19, ns).

CONCLUSIONS: The SPECTRA’s cognitive concerns scale was correlated with memory problems, sleep problems, disinhibition and psychoticism that make conceptual sense. Cognitive concerns scale was not related to psychotic symptoms or psychosis.

POSTER # 33

Impact of Higher Phototherapy Threshold for Jaundice Guidelines in Healthy Infants Born ≥35 Weeks on Readmissions in an Urban Multiethnic Community Hospital

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BACKGROUND: Neonatal hyperbilirubinemia is a common condition of the newborn. The American Academy of Pediatrics (AAP) updated their guidelines for managing hyperbilirubinemia in 2022.

OBJECTIVE: To explore the effect of revised phototherapy threshold on readmission and hours of phototherapy.

METHODS: A retrospective chart review of infants born ≥35 weeks between September 15, 2021 and September 14, 2022 following AAP 2004 guidelines (G1), and between September 15, 2022 and September 15, 2023 following AAP 2022 guidelines (G2) for phototherapy. G1 and G2 were compared for birth weight, gestational age, gender, ethnicity, mode of delivery, readmission rate for phototherapy, initial level of bilirubin [transcutaneous bilirubin (TcB)] and end level of bilirubin [total serum bilirubin (TSB)], hours of phototherapy (time ordered to time discontinued), and length of stay (LOS). A $p<0.05$ was considered significant.

RESULTS: Of a total of 4579 newborns ≥35 weeks (49%) were in G1 and 2344 (51%) were in G2. When comparing the G1 and G2, there were no significant differences in birth weight, gestational age, gender, ethnicity, mode of delivery, and readmission for phototherapy between the two groups. Total patients requiring phototherapy in G2 was lower, $p<0.001$. The higher level of TcB and TSB ($p<0.001$), greater number of hours of phototherapy per patient ($p=0.01$), and longer LOS ($p<0.01$) in G2 were statistically significant.

CONCLUSIONS: In our multiethnic sample, lower total number patient receiving phototherapy, higher TcB and TSB, greater number of hours of phototherapy per patient and longer LOS were observed after implementing updated guidelines for managing hyperbilirubinemia.

POSTER # 34

Relative Age and Attention-Deficit/Hyperactivity Disorder in An Urban Multiethnic Developmental-Behavioral Clinic in New York State

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BACKGROUND: Attention-deficit/hyperactivity disorder (ADHD) is common. In NYS, children are admitted to the school grade designated by their chronological age (CA) attained during the calendar year. Relative age (RA) is CA minus preferred age on Sept 1.

OBJECTIVE: To explore ADHD evaluation in children with younger RA.

METHODS: Charts of children aged 3-≤8 years referred from July 1,2021 to June 30,2024 for evaluation of ADHD were reviewed for demographics, referral/evaluation date, final diagnosis. RA categorized for analysis: birth months Jan-Apr as late/older, May-Aug as middle/middle and Sept-Dec as early/younger. $P<0.05$ was considered significant.

RESULTS: Of 124 children evaluated, male was in 77% with median age 5 (4,6) years, and race/ethnicity White/Caucasian in 64%, Hispanic 59% and Black 16%. English (60%) and Spanish (39%) were the preferred languages. Of the 20 children (3%) not diagnosed ADHD, nine (45%) were younger, seven (35%) in middle and four (20%) older. Increases in age increase likelihood of referral ($\beta=0.66$,SE=0.30,OR=1.94,$p=0.03$). Children with RA in older category were more likely to receive a referral ($\beta=11.41$,SE=4.67,OR=9.03,$p=0.01$) and children in middle category least likely ($\beta=-1.80$,SE=0.79,OR=0.17,$p=0.02$). Children with older RA (median=6,IQR 5.0,6.8) and younger RA (median=6,IQR5.0,6.0) were more likely to be diagnosed at later ages compared to the middle (median=5,IQR4.0,6.0).

CONCLUSIONS: In our small sample of mostly White/Hispanic ethnicity, increase in age increases likelihood of referral for ADHD evaluation. Children's RA in older and younger categories were more likely to be diagnosed at later ages. Children referred but not diagnosed tend to have younger RA.

POSTER # 35

A Rare Case of Multisystem Langerhans Cell Histiocytosis and Cutaneous Extramedullary Hematopoiesis in a Newborn Presenting as Blueberry Muffin Baby Syndrome

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CLINICAL INFORMATION: The patient is a newborn male born at 37 weeks with a "blueberry muffin rash", diffuse violaceous macules and papules, erythematous ulcerated lesions and petechiae. Infectious disease workup was negative. CBC (0d) showed WBC 14.95 K/uL, hemoglobin 24.1 g/dL, MCV 103.3 fL, and platelets 67 K/uL. MRI showed thymic enlargement with heterogeneous enhancement, multifocal hepatic lesions and no definite osseous lesions. A skin punch biopsy (age 3d), followed by bone marrow biopsy and EGD/colonoscopy (20d) was performed. The placenta was also examined. X-ray at 2 mo showed lytic and sclerotic extremity bone lesions.

DETAILS OF MICROSCOPIC FINDINGS: Skin-peri adnexal and perivascular histiocytoid cells with eccentric oval to reniform nuclei. Very focal perivascular collections of immature hematopoietic cells in the mid and deep dermis, with myeloid precursors and immature neutrophils, some band-like in appearance, characteristic of extramedullary hematopoiesis (EMH). Duodenum- histiocytoid infiltrate with eosinophils expanding the lamina propria. Bone marrow- maturing trilineage hematopoiesis with inconspicuous histiocytoid cells; the clot had singly scattered large histiocytoid cells with grooved nuclei. Placenta- focal histiocytoid involvement.

IMMUNOPHENOTYPE: Skin- histiocytoid cells expressed CD4, CD68, S100, CD1a, and CD11c, confirming a Langerhans cell phenotype, with variable Langerin (CD207) staining with some negative cells, compatible with an indeterminate cell phenotype. There was diffuse cytoplasmic *BRAF* p.V600E immunoreactivity. Duodenum– infiltrate positive for CD68, S100, and CD1a, with a subset Langerin positive. Bone marrow- scattered histiocytoid cells positive for S100, CD1a, Langerin and cytoplasmic *BRAF* p.V600E. Placenta and umbilical cord– atypical cells positive for S100, CD1a, and Langerin.

MOLECULAR STUDIES: Skin biopsy NGS was negative. Digital droplet PCR for *BRAF* p.V600E was positive (1.32% allele frequency). The patient was monitored using BRAF p.V600E rtPCR and ddPCR with recent blood and bone marrow specimens negative.

FINAL DIAGNOSIS: Multisystem Langerhans cell histiocytosis with cutaneous extramedullary hematopoiesis.

INTERESTING FEATURES OF THE CASE: This case represents a rare neonatal presentation of multisystem LCH, with cutaneous EMH presenting as Blueberry Muffin baby syndrome. We documented skin, duodenal, bone marrow, and placental involvement. The Langerhans cell phenotype in neonatal LCH can include Langerin positive and negative cells, the negative without Birbeck granules. Neonatal immature indeterminate Langerhans cells varies from adult mature migratory indeterminate Langerhans cell that are also Langerin negative. Neonatal EMH presenting as a Blueberry Muffin Baby is typically from viral infections, hemolysis and leukemia. LCH should be considered. Post-therapy detection of minimal residual disease is possible with *BRAF* p.V600E rtPCR and ddPCR.

POSTER # 36

MALARIA ON THE MOVE: A CASE SERIES FROM BROOKLYN, NEW YORK

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INTRODUCTION: Malaria in the USA is rising, partly due to the influx of migrants and partly due to climate change. Similar trends have been observed at our institution. A retrospective study was conducted to analyze and review patient/parasite characteristics.

METHODOLOGY: Charts were reviewed of all malaria cases admitted between 2017-2024, diagnosed with peripheral smear or rapid antigen test. Patients' travel history, demographics, clinical course, and treatment outcomes were recorded.

RESULTS: A total of eighteen patients were reviewed, 67% were male, 72% were aged between 24-60 years. All presented with fever, 28% had gastrointestinal, while 28% had neurological symptoms. Laboratory findings revealed 78% had thrombocytopenia, 61% had hemolytic anemia and 33% had abnormal liver enzymes. All peripheral smears revealed malarial parasites. Rapid antigen test was performed in 66% cases and positive in 83%. Blood samples were sent to New York State Wadsworth Laboratory for species confirmation. Plasmodium falciparum infected 55% of patients, 28% had P.vivax, and 11% showed P.ovale. All P.falciparum cases were contracted in Africa without malaria prophylaxis. 33% cases of P.vivax and P.ovale were migrants who traveled from Colombia to Panama. Initial parasitemia was higher for P.falciparum (3%-10%) compared to P.vivax/ovale (1-2%). P.falciparum cases presented within two weeks of travel, while P.vivax/ovale presented after 4-8 weeks. Eight patients had severe malaria and were treated with intravenous artesunate, followed by oral artemether/lumefantrine. Five severe cases were caused by P. falciparum. Uncomplicated cases received Artemether/lumefantrine or Atovaquone/proguanil for three days. Only two patients developed complications, the rest recovered uneventfully.

DISCUSSION: Malaria among migrants/travelers has increased over the last few years. P.falciparum is predominant in Africa, where malaria prophylaxis is strongly advised. P.vivax/ovale are common in South America, often contracted during migration. A detailed travel history is essential for clinicians to anticipate the type of Plasmodium species and tailor treatment which can improve patient outcomes.

POSTER # 37

Remarkable Recovery from TAFRO Syndrome with Severe Renal Thrombotic Microangiopathy After Treatment with Eculizumab, Corticosteroids, Siltuximab and Rituximab

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INTRODUCTION: TAFRO (thrombocytopenia, anasarca, reticulin myelofibrosis, renal insufficiency and organomegaly) is a rare, often fatal presentation of idiopathic multicentric Castleman's disease (iMCD). Its poor prognosis is partly due to often rapid progression at onset, delay in diagnosis and lack of standardized treatment options. Here we describe a case of severe TAFRO in a 19-year-old male with a remarkable recovery after a treatment with a combination of drugs.

CASE DESCRIPTION: 19-year-old male with a prior medical history of dengue and salmonella infections presented four times to urgent care/emergency department with fatigue, myalgias, rash and sore throat and was discharged home with the diagnosis of a viral illness. He was admitted after the fourth presentation due to additional complaints of chest pain, nausea, vomiting, diarrhea, abdominal pain, loss of appetite, night sweats and weight loss. His labs were significant for leukocytosis ($25.1x10^3$/µl), anemia (12.6g/dl), thrombocytopenia ($106.1x10^3$/µl), acute kidney injury (creatinine 1.5 mg/dl), elevated CRP (310.4 mg/l), ESR (86 mm/hr) and procalcitonin (5.64 ng/ml). Imaging showed pleural effusions, anasarca, and mild axillary lymphadenopathy (<2cm bilaterally). He was treated for sepsis with no clinical improvement. His urinalysis was positive for protein and blood and urine sediment showed muddy brown casts. The patient was transferred to a university hospital for kidney biopsy. Full infectious and rheumatology workup was negative, kidney biopsy showed thrombotic microangiopathy. He started treatment with eculizumab for concern for atypical hemolytic-uremic syndrome. Upon further evaluation, the combination of thrombocytopenia, anasarca, renal insufficiency and lymphadenopathy/organomegaly raised concern for TAFRO syndrome. Axillary lymph node biopsy was performed, pathology revealed 'Castleman-like changes'. Treatment was initiated with high dose corticosteroids and Siltuximab. Due to severe clinical presentation with the need of renal replacement therapy and intensive unit level of care, rituximab was also added as adjunct therapy. Within 2 months, he experienced full recovery of his renal function, cytopenias and anasarca. He resumed an active lifestyle with no limitations. Siltuximab therapy is planned to continue indefinitely or until progression of disease.

CLINICAL RELEVANCE: With only dozens of cases reported worldwide, treatment of TAFRO usually mirrors treatment of iMCD with corticosteroids and Siltuximab. Published case reports differ in the treatment of severe cases, especially with thrombotic microangiopathy with severe renal impairment. Treatment with eculizumab and rituximab in addition to steroids and Siltuximab led to a complete resolution of symptoms and recovery of renal function in our patient and can serve as a precedent for future cases.

POSTER # 38

Rare Obstetrical Complication of Paresthesia and Lower Extremity Pain in an L5 Dermatomal Distribution

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INTRODUCTION: Radiculopathy and Lower Extremity nerve injuries including common fibular neuropathy are rare complications in pregnancy and during labor. Lower extremity radiculopathy can arise from several closely related causes; lumbar radiculopathy, lumbosacral plexopathy, or common fibular neuropathy. Complications of nerve compression and injuries related to pregnancy can cause paresthesia, hypoesthesia, numbness, weakness, atrophy and diminished or absent deep tendon reflexes.

CASE: This is a case of a 36-year-old primigravida Female with a chief complaint of burning and paresthesia starting in the 3rd month of pregnancy. Her complaints lasted throughout the pregnancy and after childbirth for over one year prompting a referral to pain management.
She described diminished sensation in a bilateral L5 dermatomal distribution and complained of burning uncomfortable sensation. She was encouraged to start gabapentin and obtain an EMG/NCS. She was also recommended to apply capsaicin to the affected area. On MRI she was found to have a disc herniation affecting L5 nerve roots bilaterally. Ultimately, she improved with Physical therapy and capsaicin, did not schedule the EMG/NCS so those results are unavailable.

DISCUSSION: The biomechanical adjustments required during pregnancy create conditions conducive to nerve compression. The anterior shift in the center of gravity leads to altered postural mechanics, placing additional stress on the lumbar spine. This shift changes the force distribution along the spine, increasing pressure on specific intervertebral discs. Such changes can exacerbate pre-existing disc herniations or create new ones, particularly at the L4/L5 level, which is a common site of pathology during pregnancy. These herniations impinge on nerve roots, resulting in pain, numbness, or weakness radiating to the lower extremities.
Fetal positioning and macrosomia are additional mechanical contributors. These factors can cause direct compression of nerve roots or worsen pre-existing disc pathology. Furthermore, the dorsolateral lithotomy position often utilized during childbirth, along with prolonged compression from medical personnel or devices during labor, creates focal pressure on peripheral nerves, such as the femoral or peroneal nerve, leading to injury.

CONCLUSION: It has been estimated that radiculopathy and nerve injury can occur in less than 0.92 % deliveries. Physical therapy and core strengthening can be considered before more invasive injections and procedures once hormones have normalized and the center of gravity changes after weight loss. Recognizing the multifactorial nature of lower extremity pain in a dermatomal distribution that occurred during pregnancy is essential for timely diagnosis and management. Clinicians should be aware of these risks and adopt preventive measures, such as proper positioning during labor, careful monitoring of weight gain, and providing support to optimize posture and ambulation during pregnancy. Early intervention and rehabilitation can help mitigate long-term complications, ensuring better outcomes for both mother and child.