ACP American College of Physicians
Leading Internal Medicine, Improving Lives | Hawaii Chapter

## 2026 Hawai'i Chapter

## Scientific Meeting

# Honolulu Country Club

**Saturday, February 28, 2026**

**In-person/Virtual**

- *This activity has been designated for 6.0 CME credits and 6.0 MOC points*


*Thank you to all Hawaii Chapter members for the compassion, hard work, and dedication you bring to your patients and to the people of Hawai‘i every day of the year. You are truly exceptional.*

*I am pleased to announce that our chapter is in receipt of the **Gold Level of the 2025 Chapter Excellence Award**! The award recognizes truly extraordinary chapters that surpass excellence in chapter management. We are in the company of **68** other outstanding chapters. In order to achieve the Gold Level of the Chapter Excellence Award, chapters must meet 22 Bronze criteria, 12 Silver criteria and 25 Gold level activities. Criteria include such activities as having a legislative action plan or agenda, holding a volunteerism/community service activity, holding multiple stand-alone meetings, having revenue sources outside of dues and meeting registration fees, implementing a strategic plan, implementing a formal recruitment and retention plan and measuring outcomes, conducting various activities for Medical Students, Residents and Early Career Physicians. I would like to extend a special thanks to those chapter members who assisted us in all of these endeavors! For their hard work and dedication, we received this award.*

| Time | Saturday, February 28, 2026 ACP HI Program | |
|---|---|---|
| 7:30 -7:55 am **(25 minutes)** | **Welcome and Opening – Main Ballroom** | |
| 7:55-8:00 am **(5 minutes)** | **Governor's Welcome** – Ryon Nakasone, MD, FACP<br>Program Chair – Kuo-Chiang Lian, MD, FACP | |
| 8:00-8:45 am **(45 minutes)** | ***Hepatitis C*** – Tarquin Collis, MD | |
| 8:45-9:45 am **(60 minutes)** | **Podium Sessions – Main Ballroom** | |
| 8:45-9:00 am **(15 minutes)** | Helicobacter Pylori is Associated Viral Co-Factors in Gastrointestinal Stromal Tumors – Temi Tubon, MD | |
| 9:00-9:15 am **(15 minutes)** | Disparities in Type 2 Diabetes Mellitus-Related Vascular Complications Among Compacts of Free Association Patients: A Retrospective Database Study in a Nephrology Clinic in Oahu, Hawai'i - Hope Dang | |
| 9:15-9:30 am **(15 minutes)** | Ethnic Differences and Distinct Clinical Risk Patterns in Early-Onset Rectal Versus Colon Cancer: Analysis of A National Database - Xavier Heidelberg | |
| 9:30-9:45 am **(15 minutes)** | Impact of Temporary Insurance Gaps on Usual Healthcare Access and Acute Care Reliance: A Cross-Sectional Analysis of NHANES 2017–2023 - Tatchaya Kanthajan | |
| 9:45-10:15 am **(30 minutes)** | **Break/Networking/Visit Exhibitors** | |
| 10:15-11:00 am **(45 minutes)** | ***Updates in Hospital Medicine*** – David Spinks, MD, FACP, Christina Chong, MD, FACP<br>**Main Ballroom** | |
| **11:00-12:00pm** | **Oral Abstract Session 1 – Ewa Ballroom** | **Oral Abstract Session 2 – DH Ballroom** |
| 11:00-11:08 am **(8 minutes)** | Residents as Educators: A Resident-Driven Longitudinal Intern Bootcamp Curriculum – Abulhassan Ali, MD | Comparative Analysis of Inpatient Management of Hyponatremia: Outcomes and Strategies in the Intensive Care Unit versus Non-ICU Settings – Kristen Kircher, MD |
| 11:08-11:16 am **(8 minutes)** | Preserving Inpatient Education in the Era of X+Y Scheduling: A Pre–Post Study in Internal Medicine Training – Shunsuke Kondo, MD | Best Practice Alert Intervention in PECARN Algorithm Usage in Pediatric Head Injury Management in Hawai'i Best Practice Alert Intervention in PECARN Algorithm Usage in Pediatric Head Injury Management in Hawai'i – Emily Unebasami |
| 11:16-11:24 am **(8 minutes)** | Efficacy of high-velocity nasal insufflation in the treatment for respiratory failure: systematic review and meta-analysis – Shunsuke Kondo, MD | Inhaled Nitric Oxide in Interstitial Lung Disease: A Systematic Review and Meta-Analysis of Randomized Controlled Trials – Shun Nakahara, MD |
| 11:24-11:32 am **(8 minutes)** | Cardio-Pulmonary Amyloidosis: A Rare Cause of Dyspnea – Faz Abu Zanouneh, MD | Complex Klebsiella pneumoniae Liver Abscess Successfully Treated with Laparoscopic Drainage After Percutaneous Drainage Failure – Shun Nakahara, MD |
| 11:32-11:40 am **(8 minutes)** | Renflexis-Associated Pauci-Immune Crescentic Glomerulonephritis: A Rare Cause of Rapidly Progressive Kidney Failure – William Bowers, MD | Moyamoya Disease: A Diagnostic Challenge – Katelyn Shirai, MD |

| | | |
|---|---|---|
| 11:40-11:48 am **(8 minutes)** | Quintuple Therapy for Severe Refractory Orthostatic Hypotension – Kaiolu DeFries | When Transverse Myelitis Reveals a Bigger Picture: A Case of Neuromyelitis Optica Spectrum Disorder – Nicholas Van |
| 11:48-11:56am **(8 minutes)** | An Unexpected Finding: Urothelial Carcinoma of the Bladder in a Renal Transplant Recipient – Monica Ho | Long-acting Paliperidone Injection Causing Neuroleptic Malignant Syndrome – Stan Yuzhakov, MD |
| 12:00-12:45 pm **(45 minutes)** | **Lunch/Business Mtg/Break/Visit Exhibitor/Networking**<br>**Wellness Massages – Ewa Ballroom** | |
| 12:45-1:45pm **(60 minutes)** | **Schatz Lecture – *Advocacy*** – Raminder, Gill, MD, FACP - **Main Ballroom** | |
| 1:45-2:45pm | Oral Abstract Session 3 – **Ewa Ballroom** | Oral Abstract Session 4 – **DH Ballroom** |
| 1:45-1:53 pm **(8 minutes)** | Coronary Calcification Score Predicts Twenty-Year Mortality in Older Japanese-American Men: The Kuakini Honolulu Heart Program – Bao Xia Liang | A phone call away: Do Geriatric Registered Nurse phone calls reduce healthcare utilization? – Kevin Doan |
| 1:53-2:01 pm **(8 minutes)** | Beyond the Murmur: Rheumatic Heart Disease Challenges in the Marshall Islands – Pritish Sahoo, MD | Urinary Tract Infections and Delirium in Older Adults: An Umbrella Review of the Association, Diagnostic Challenges, and Clinical Implications – Joshua Garcia, MD |
| 2:01-2:09 pm **(8 minutes)** | Extreme Lipoprotein(a) Elevation Presenting as Systemic Arterial Thrombosis Without Atherosclerosis: A Case Report – Jordan Li | Comparative Effectiveness of GLP-1 Receptor Agonists Versus Metformin in Reducing Dementia Risk Among Adults ≥65 Years with Type 2 Diabetes Mellitus and Delirium: A 20-Year Real-World Data Analysis (2005–2025) - S. Valadi Ramakrishnan, MD |
| 2:09-2:17 pm **(8 minutes)** | System-level and Patient-Level Determinants of In-Hospital Mortality Among Patients with STEMI and NSTEMI in Hawai‘i – Jordan Li | Cold Agglutinin Syndrome Secondary to Mycoplasma pneumoniae Infection in a Renal Transplant Recipient on Tacrolimus-Based Immunosuppression – William Kawahara, MD |
| 2:17-2:25 pm **(8 minutes)** | Not Everything That Looks Malignant Is Cancer: A Case of Peritoneal Tuberculosis – Katelyn Saiki, MD | A minor dog bite, A major infection: Fulminant Capnocytophaga sepsis – Siddharth Kumar, MD |
| 2:25-2:33 pm **(8 minutes)** | Rapid Pericardial Effusion Formation in Purulent MSSA Pericarditis: A Case Report Tamlyn Sasaki | GABAA Receptor Encephalitis Masquerading as Persistent Focal Motor Status: A Case of Prolonged Refractory Status Epilepticus – Hanna Mettias, MD |
| 2:33-2:41 pm **(8 minutes)** | Skin Prick Testing after Anaphylaxis to Triple-Antibiotic Ointment Identifies Bacitracin as Causative Agent – Yuuki Morishige | |
| 2:45-3:00 pm **(15 minutes)** | **Break/Visit Exhibitor/Networking**<br>**Wellness Massages – Ewa Ballroom** | |
| 3:00-3:45 pm **(45 minutes)** | ***AI in Healthcare*** – Masuyuki Nogi, MD, FACP<br>**Main Ballroom** | |
| 3:45-4:30 pm **(45 minutes)** | ***Difficult Decisions in Elderly Patients*** – Robert Gluckman, MD, MACP<br>**Main Ballroom** | |
| 4:30-4:45 pm **(15 minutes)** | **Break/Visit Exhibitor/Networking** | |
| 4:45-5:00 pm **(15 minutes)** | **Awards**<br>**Main Ballroom** | |
| 5:00-7:00 pm **(120 minutes))** | ***Doctor's Dilemma*** – *Chief Medical Residents* – ***Main Ballroom*** | |

# Learning Objectives

At the conclusion of this activity, the participant will be able to know about:

- Hepatitis C
- AI in Healthcare
- Hospital Medicine Updates 2026
- Schatz Lecture - DEI
- Difficult Discussions with the Elderly
- Doctor's Dilemma

# CME Accreditation and MOC Points

The American College of Physicians is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

The American College of Physicians designates this live activity for a maximum of **6.0** ***AMA PRA Category 1 Credit(s)™***. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Successful completion of this CME activity, which includes participation in the evaluation component, enables the participant to earn up to **6.0** medical knowledge MOC points in the American Board of Internal Medicine's (ABIM) Maintenance of Certification (MOC) program. Participants will earn MOC points equivalent to the amount of CME credit claimed for the activity. It is the CME activity provider's responsibility to submit participant completion information to ACCME for the purpose of granting ABIM MOC credit.

# Your Opinion Counts

At the conclusion of the meeting, please take a moment to complete the meeting survey form and verification of attendance form in your packet and return it to the registration desk. We value your opinion and use the surveys in planning future meetings.

# Chapter Excellence Award

We are pleased to announce that our chapter is a recipient of the 2025 Chapter Excellence Award. The Chapter Excellence Award recognizes those chapters that excel in reaching the standards for managing a chapter, such as communicating to members, instituting Medical Students' and Resident/Fellow Members' activities and advancing and recruiting members.

# Resident/Fellows' and Medical Students' Activities

Clinical vignettes, posters, and research papers prepared by Resident/Fellow Members and Medical Students will be presented at the meeting. Winners will receive a cash prize and be eligible for entrance into the national competition held during the ACP Internal Medicine National Meeting 2026.

## Pathways to Fellowships

Attendance at chapter meetings can help all ACP members meet the qualifications for advancement to Fellowship. It is especially important for those applying under the pathway that calls for five years of activity as a member.

## Governor

**Ryon K. Nakasone, MD, FACP**
ACP Governor, Hawaii Chapter
Assistant Professor,
Department of Medicine
University of Hawai'i
Honolulu, HI

**Email:** ryon@hawaii.edu

## Program Committee

**Program Chair:** Kuo-Chiang Lian, MD

Mary Ann Antonelli, MD, FACP
Kellen Bean, MD
Lisa Camara, MD, MACP
Nicole Chong, MD
James Epure, MD, FACP
Samuel Evans, MD, FACP
Evan Ewers, MD
Alvin Furuike, MD, MACP
Robert Gluckman, MD, MACP
Florence Kan, MD
Jennifer Katada, MD, FACP
Stephen Kemble, MD
Diana Kim, MD, FACP
Thomas Klien, MD
Kelsey Kwong, MD
Ho Hyun Lee
Kuo Lian, MD, FACP
Ryon Nakasone, MD, FACP
Hema Narlapati, MD
Janet Onopa, MD, FACP
Abby Pandula, MD
Tamlyn Sasaki
David Spinks, MD, FACP
Megan, Sterling, DO
Arvin Tan, MD
Philip Verhoef, MD, FACP
Helen Victor, BBA
Travis Watai, MD, FACP
James Yess, MD, FACP

# Speakers'

***Christina Chong, MD, FACP*** - Christina Chong attended the John A. Burns School of Medicine and completed internal medicine residency at Oregon Health and Science University. She is a teaching hospitalist and the director of medical education at the Queen's Medical Center Punchbowl.

***Tarquin Collis, MD*** - Tarquin Collis is Chief of Infectious Disease at Kaiser Permanente Hawaii, and also serves as Chief of Medical Specialties and Transplantation. He was born in Hawaii, and was raised in Kailua and in Kingston Jamaica. He attended Cornell and Oxford University as an undergraduate, majoring in English: he completed his MD at Cornell University Medical College and his Internal Medicine Residency at the Hospital of the University of Pennsylvania. He then went on to do a fellowship in Infectious Disease at the University of Washington, where he also completed a Master's in Epidemiology. Dr. Collis returned to Hawaii in 2001 and joined Kaiser Permanente; he established KP's Viral Hepatitis Clinic in 2004, and has served as Chief of the Division of Infectious Disease since 2005; he has also overseen all of Kaiser Hawaii's medical specialties administratively since 2007. Dr. Collis remains very active clinically and enjoys caring for patients much more than attending meetings. He met his wife Katie Kingsley in medical school, and they've worked closely together and shared many patients in the decades since, while raising three busy daughters. In his spare time, when not surfing or swimming, Dr. Collis can often be found walking his dogs Henry and Chico in Manoa at all hours.

***Raminder S. Gill, MD, MACP -*** Raminder Gill is currently a Clinical Professor at the UC Davis School of Medicine. He completed his undergraduate education at UC, Davis before returning for residency in internal medicine. He is a graduate of The Ohio State University College of Medicine.

He is a hospitalist at UC, Davis where he works with medical students, residents, and independently manages general medicine ward patients. A longtime member of ACP, since he was a medical student, he became more involved with the northern California chapter beginning with organizing and participating in the chapter meetings and later joined state and national advocacy efforts with ACP. He is a former Governor of the northern California chapter and currently serves as chair of ACP Services PAC, which is ACP's political action committee.

***Robert Gluckman, MD, MACP –*** Dr. Robert Gluckman currently serves as the Chief Medical Officer for United Healthcare Community Plan- Hawaii. Prior to joining United Healthcare, Dr. Gluckman worked for Providence Health System and served in a variety of leadership positions including Chief Medical Officer for Providence Health Plans, Chief Medical Officer for the teaching clinics at Providence Medical Group-Oregon and Associate Program Director for the Providence St. Vincent Internal Medicine Residency Program. He served on the faculty for Providence St. Vincent Internal Medicine Residency for 18 years, where he maintained an active internal medicine practice. Dr. Gluckman also served as Co-Chair of the Clinical Transformation Council for Providence Oregon Region, In that capacity he provided though leadership and operational support for the Region's clinical innovation efforts. Throughout his academic career he has focused on applying medical evidence to clinical practice, with an emphasis on increasing the value of care delivered to patients.

Dr. Gluckman graduated summa cum laude in 1978 from the University of Illinois and earned his medical degree in 1982 from the University of Chicago. He completed his residency at Michael Reese Hospital in Chicago and is board certified in internal medicine.

Dr. Gluckman is past Chair of the American Health Insurance Plan (AHIP)Chief Medical Officer Council and served as AHIP's Liaison to the Center of Disease Control's Advisory Committee on Immunization Practices (ACIP). Dr. Gluckman is Treasurer Emeritus of the American College of Physicians and served on the Board of Regents for the American College of Physicians (ACP), the nation's largest physician specialty society. He brings a strong background in advocacy and public policy to his current role. He is past chair of the ACP's Medical Practice and Quality Finance and ACP Services Political Action Committees. He also served on the Health and Public Policy and Performance Measurement Committees. He received the ACP Oregon Chapter's Laureate Award in 2013 for his contributions to the internal medicine community.

Dr. Robert Gluckman currently serves as the Chief Medical Officer for United Healthcare Community Plan- Hawaii. Prior to joining United Healthcare, Dr. Gluckman worked for Providence Health System and served as CMO for Providence Health Plan, Co-chaired the Oregon Region Clinical Transformation Council and Associate Program Director for the Providence St. Vincent Internal Medicine Residency.

Dr. Gluckman is Treasurer Emeritus for the American College of Physicians and Past Chair of the Medical Practice and Quality and Finance Committees. He also served as Chair of the American Health Insurance Plans CMO Council and Liaison Member to the CDC Advisory Committee on Immunization Practice.

***Masayuki Nogi, MD, MHPE, FACP, FHM -*** Earned his medical degree from Kyoto Prefectural University of Medicine. He completed his Internal medicine residency at the University of Hawaii. Served as chief resident before joining the Queen's University Medical Group as a Hospitalist. Passionate about international medical education, faculty development, physician migration, and accreditation. Completed University of Hawaii Medical Education fellowship (2015) and Master's program for Health Professional Education at FAIMER-Keele University. Currently works as an Academic hospitalist, Associate clinical professor at JABSOM, Division Chief of Hospital medicine, and Associate Medical Director for Instructional Design and Technology at the Queen's Medical Center, Honolulu.

***David Spinks, MD, FACP -*** Dr. David Spinks graduated from Columbia University College of Physicians and Surgeons, and Columbia University Mailman School of Public Health. He completed his internship and residency in internal medicine at Stanford University Hospitals and Clinics. He currently works as a teaching hospitalist at The Queen's Medical Center, Firm Advisor for UHIMRP, and POCUS instructor at UCSF and The University of Texas.

# Doctors' Dilemma


**Kellen Bean, MD**
Chief Medical Resident, Kaiser Permanente, Honolulu, HI

**Nicole Chong, MD**
Chief Medical Resident, UHIMRP, Honolulu, HI

**Kelsey Kwong, MD**
Chief Medical Resident, UHIMRP, Honolulu, HI

**Hema Narlapati, MD**
Chief Medical Resident, Tripler Army Medical Center, Honolulu, HI

**Arvin Tan, MD**
Chief Medical Resident, UHIMRP, Honolulu, HI

# February Born Members

Gary W Ahn, MD
Maythawee Bintvihok, MD
Terezia A Bush, MD
Christian Capirig
Elise Chong
Wendy Chu
Weiming Du, MD
James P Epure, MD FACP
Bradley Fujiuchi
Alison Goo, MD
Marina Hitosugi-Levesque, M
Daniel WW Hong
Michael Ishioka, MD FACP
Siddharth K Joshi, MD
Robert L Justice, MD
Janelle Kalir, MD
Mouhamed Kannass, MD
Keiko Kimura, MD
Shari L Kogan, MD FACP
Joey Y Kohatsu, MD
Nguyen Lauren
Dylan Lawton
Lauryn Liao
James R Lucas, MD FACP
Rand Matbachi, MD
Akihiro Miyashita, MD
Ashley Morisako
Cierra M Nakamura
Jadon Neuendorf, MD
Donald K Nikaitani, MD
Sorawit Ongsupankul, MD
Morgan Quinley
Tara Reed, MD
Agnes Santiano
Hannah Schmitz, MD
Dudley S Seto, MD
Patrick Shaw
Edward A Silver, MD
Adivitch Sripusanapan
Reese Suzuki
Benjamin A Tamura, MD
Bradley K Tokeshi, MD
Andrew J Van Wieren, MD FACP
Philip A Verhoef, MD FACP
Josephine T Waite, MD
Anthea Wang, MD
Joy S Wilson, MD
Jennifer Wong


# *To our New Members*

Mohammad Abdelhafez, MD
Sarah Abdul-Ghani
Titan Z Alexio
Esma Arslan
Jasmine Banner, MD
Kellen Bean
Kevin Benavente
Mari Camacho
Lisa A Camara, MD MACP
Marguerite Cazin
Jennifer Chao
Monet Cheung, MD
Marci Chock, MD
Cecilia M Choi, MD
Nicole Chong
Elise Chong
Ethanbaxter Y Combs
Alexander Cotter
Kiana T Cvetkovic, MD
Hope Dang
Titus S David, MD
Kaiolu Defries
Magdalaine Anjeleigh Dela Cruz
Miranda Eddins
Darian Finley
Karalyn Fong
Natasha T Fortune-Checotah
Gina Fujikami, MD
Haylee F Fujioka
Erick Garcia
Yula Yzabelle B Geniza
Taylor Gomban
Joshua Grube
Micah Heimuli
Monica M Ho
Taylor K Ho
Timothy C Holschuh, NP
Bradon Hong
Chanel M Hunter
Andy Hwang
Ren Ikeda
Mika Ishii
Emily J Kang
Kourtney Kanja
Tatchaya Kanthajan
David A Kato, MD
William Kawahara
Lauren Kim
Joshua R Knapp, DO
Kelli A Kokame
Zoeann Kon
Landon Kozai
Siddharth Kumar, MBBS
Tiffany Kurozawa
Helen Kwon
Kelsey Kwong
Nguyen Lauren
Roy Levit, MD
Kevin Liu
Roosevelt Lu
Mitchell P Marabella
Rand Matbachi, MD
Miles Miki
Yuuki Morishige
Connor Murakami
Aiko Murakami
Shun Nakahara
Steven Namiki
Kevin Nebrejas
Kridhitach Ngarmukos
Ryan Nishi
Scott Nishioka
Margaret Ochner, MD
Amy Odaira
Julia Oehlers
Tracie Okumura
Marissa Oshiro
Liana Owen
Thomas Noeau Parpana IV
Shantel Pascual
Pratik Patel, MD
Rita Paulis, MD
Thomas Paulson
Kylie Popovich
Richard Rista
Rudy Rodriguez Arreaga
Alexander T Rovinsky
Katelyn Saiki
Maria Theresa Santiago
Agnes Catherine S Santiano
Maxwell Shen, MD
Shu Yi Shi
Kelly Shibuya
Dorothy M Shigaki
Katelyn Shirai
Kalena Spinola
Aarthi Sridhar, MD
Adivitch Sripusanapan
Kacie Sumikawa
Dillon Tacdol
Kaitlyn Takata
Arvin Jeremy Tan
Manasawee Tanariyakul, MD
Maluikeau Tang
Nolan M Tanji
Lloyd Taylor, USNA
Temitope Tobun
Charles Tran
Kyle M Tsujimoto
Motoki T Tsuneoka
Emily M Unebasami
Maya Ushijima
Kristine Vo
Cindy Vuong
Christina Wong
Wilder Worrall
Leo Wu
Asia K Yamada
Rebecca Yamamoto, MD
Jaelynn Yim
Sandra Y Zeng
Angeline Zhou

# Podium Presentations

**Podium 8:45 am**

# Helicobacter Pylori Is Associated Viral Co-Factors In Gastrointestinal Stromal Tumors

Temitope Tobun, MD[1], Yujia Qin, PhD[4], Karolina Peplowska, PhD[4], Jarin Loristo, MS[3], Maarit Tiirikainen, PhD[4], Scott K. Kuwada, MD[1,2,5]

[1] UH GI Fellowship Program, Honolulu, HI
[2] UH Department of Medicine, Honolulu, HI
[3]UH John A Burns School of Medicine, Honolulu, HI
[4] UH Cancer Center, Honolulu, HI
[5] Queen's Medical Center, Honolulu, HI

While the role of Helicobacter pylori (Hp) in gastric cancer (GC) is well established, our recent findings suggest a strong association between Hp infection and gastrointestinal stromal tumors (GIST). Although nearly half of the world population is infected with Hp, only 1–2% develop GC and even fewer develop GIST suggesting other cofactors may be required. Hp-induced chronic gastritis leads to hypochlorhydria which may facilitate viral coinfection. We therefore hypothesized that concurrent Hp and viral infection may contribute to gastric tumorigenesis.

Aim: To determine if Hp infection is associated with viruses in GIST cases.

Methods: We utilized several microbial detection assays to identify the presence of Hp and viruses. Endpoint PCR detection of 5 Hp genes (vacA, 16S rRNA, UreB, IceA, HP1177) was performed on the DNA extracted and purified from human tissues samples from 28 gastritis controls and 73 GIST cases. For viral detection, DNA from the same samples was subjected to DNAseq library preparation followed by enrichment on Twist viral panel probes (>600,000 probes designed to detect 1,160 viruses) and NGS sequencing on Illumina's NextSeq500 instrument. The viral DNA sequences were then matched with public databases. Multiple viruses were found at significantly high copy numbers but only those significantly associated with Hp were pursued further. Finally, TaqMan qPCR was performed on the original DNA samples to validate the presence of the viruses detected by NGS in the GIST cases and controls.

Results: Hp was highly associated with GIST cases vs controls (gastritis only) ($p<0.00001$) While there was no significant difference in the proportion of controls and GIST cases with HHV-4 detection, there was significantly greater coinfection of HHV-4 and Hp in the GIST cases than controls (66.67% vs 22.22%; $p = 0.025$). HHV-6A was not detected in either the cases or controls. HHV-6B was significantly more detected in controls than GIST cases (50.00% vs 23.29%; $p = 0.009$), however, HHV-6B and Hp coinfection was much more common in GIST cases than controls (64.7% vs 3.6%; $p < 0.00001$).

Discussion: The significant association of Hp with HHV-4 and HHV-6B in GIST but not controls suggests that they may cooperate with Hp to promote GIST, an association not previously described. A similar co-infection pattern between HHV-4 and Hp has been previously reported in gastric adenocarcinoma, which like GIST is highly associated with Hp infection. These results suggest a model in which Hp may increase the chances of co-infection with tumorigenic DNA viruses resulting in cooperativity in the generation of GIST. Ongoing investigation of DNA viral integration in GIST is underway.

**Podium 9:00 am**

# Disparities in Type 2 Diabetes Mellitus-Related Vascular Complications Among Compacts of Free Association Patients: A Retrospective Database Study in a Nephrology Clinic in Oahu, Hawai'i

Hope Dang[1], Liana L. Owen[1], Saige R. Fong[1], Nicholas H. Van[1], Helen S. Kwon[1], Sean M. Choi[1], Kyle Ishikawa[1], Christie Izutsu, MD, FACP[2]

[1]UH John A Burns School of Medicine, Honolulu, HI
[2] UH Department of Medicine, Honolulu, HI

Introduction: Compacts of Free Association (COFA) citizens experience disproportionately high rates of type 2 diabetes mellitus (T2DM). Unique challenges predispose them to diabetes-related vascular complications, yet prior studies group them with broader ethnic categories, masking key differences. This study disaggregates the data to clarify the incidence rate and risk factors for vascular complications in the COFA population with the goal of promoting health equity.

Methods: We conducted a retrospective chart review of patients in a private nephrology practice aged 18 or older diagnosed with T2DM before 8/1/24. COFA patients were identified by ethnicity and preferred language. Native Hawaiians and those with type 1 diabetes were excluded. Data collected included demographics, laboratory values, and vascular complications. Time-to-complication and descriptive statistics for potential risk factors were compared between COFA and other patients.

Results: Of 204 patients, 172 (84.3%) non-COFA and 32 (15.7%) COFA citizens were identified. COFA patients were diagnosed with T2DM at a significantly younger age (mean 43 ± 11 vs. 57 ± 14 years; P<.001) and had higher hemoglobin A1c values (mean 10.13 ± 2.85 vs. 8.30 ± 2.73; P=.023). The COFA patients utilized acute care services more frequently, with 10+ hospitalizations in 25% versus 7% of non-COFA, and 4+ emergency department visits in 72% versus 26% (both P<.001). Additionally, COFA patients experienced significantly shorter times from T2DM diagnosis to onset of several major vascular complications, including end-stage kidney disease (P=.018), initiation of dialysis (P=.0094), diabetic retinopathy (P= .015), below-knee amputation (P=.0016), and peripheral vascular disease (P=.0096).

Conclusion: COFA patients develop T2DM earlier, exhibit poorer glycemic control, and utilize acute care services more frequently compared to non-COFA patients, which corresponds to a more rapid progress more rapidly to multiple vascular complications. This underscores the need for early intervention, screening, and targeted management. Further research is needed to understand the drivers of these disparities and improve long-term outcomes for COFA patients.

**Podium 9:15 am**

# Ethnic Differences and Distinct Clinical Risk Patterns in Early-Onset Rectal Versus Colon Cancer: Analysis of A National Database

Xavier Heidelberg[1], Aoi Ogawa, BA[2], James Davis, PhD[2], and Scott K. Kuwada, MD[2]

[1] UH John A Burns School of Medicine, Honolulu, HI
[2] UH Department of Medicine, Honolulu, HI

Early-onset of colorectal cancer, defined as colorectal cancer diagnosed before age 50, has been increasing in the United States, and multiple factors such as metabolic disease, dietary patterns, antibiotic exposure, hereditary predisposition, food additives, physical inactivity, and male gender have been implicated. To date, whether or not these risk factors differ between early-onset rectal cancer (EORC) and colon cancer (EOCC) has not been evaluated.

Aim: To compare risk factors for EORC and EOCC in the US.

Methods: This study utilized the TriNetX National database, which includes data from over 69 participating health institutions with a study population of approximately 124,000,000 individuals. EOCC and EORC cases diagnosed between 2013 and 2023 were compared for the prevalence of type 2 diabetes (T2DM), hypertension, hyperlipidemia, obesity, smoking, alcohol use disorder, family history of GI cancer, Syphilis, HIV and ethnicity. Statistical comparisons were conducted using Chi-square and Fisher's exact test to estimate odds ratios with 95% CI.

Results: We analyzed 287,876 CRC patients, including 29,617 EOCC and 7,018 EORC patients. Patients with EORC were more often male ($p < 0.0001$) and older at diagnosis ($p = 0.0362$). EOCC patients had higher rates of metabolic risk factors, including T2DM, hyperlipidemia, hypertension, and obesity (all $p < 0.0001$). Nicotine dependence ($p < 0.0001$), tobacco use ($p = 0.002$), and alcohol-related disorders ($p = 0.04$) were also more common in EOCC. In contrast, HIV ($p < 0.0001$) and syphilis ($p = 0.005$) were more prevalent among individuals with EORC than EOCC. For EORC patients, 50.4% were White, 4.5% Asian, and 0.7% NHPI. Nevertheless, NHPI were disproportionately affected, with a significantly higher incidence rate of EORC than in Whites ($p = 0.033$) or Asians ($p < 0.001$). When the proportion of EORC was compared to all rectal cancers by ethnicity, NPHI or Hispanics had significantly more EORC compared to Whites, Asians, or Blacks.

Conclusion: NHPI and Hispanics have disproportionately more EORC than other ethnicities. Metabolic risk factors, female sex, smoking, family history of GI cancer, alcohol-related disorders, and NHPI ethnicity were more commonly observed in EOCC than in EORC. On the other hand, HIV infection, syphilis, and male gender were more strongly associated with EORC than EOCC. These findings implicate other factors, such as infections, in the genesis of EORC and warrant further investigation as we seek preventive measures for EORC.

**Podium 9:30 am**

# Impact of Temporary Insurance Gaps on Usual Healthcare Access and Acute Care Reliance: A Cross-Sectional Analysis of NHANES 2017–2023

Tatchaya Kanthajan, MD[1], Narathorn Kulthamrongsri, MD[2], James Yess, MD, FACP[1,3]

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Background: Health insurance plays an important role in patient outcomes because being uninsured may delay or limit access to care. Prior studies have shown that uninsured individuals use emergency departments less often than those with private coverage. However, the impact of brief gaps in insurance on care-seeking behavior remains less understood, particularly within key subgroups. Determining whether short-term lapses shift patients toward urgent or emergency settings is important. Clarifying this relationship may highlight the value of continuous insurance coverage, even within a single year, in reducing avoidable urgent care or emergency department visits.

Methods: A cross-sectional study used data from the 2017–2023 National Health and Nutrition Examination Survey to examine the relationship between having an insurance gap within the past year and a person's usual place of healthcare. Usual care locations were categorized as: (1) doctor or health center (reference), (2) urgent care, emergency department, or other, and (3) VA or military facility. Multinomial logistic regression was used to estimate relative risk ratios (RRRs), adjusting for age, sex, race/ethnicity, education, marital status, income-to-poverty ratio (PIR), BMI, smoking status, and diabetes. Subgroup analyses were conducted across smoking status, age categories, race and ethnicity (Hispanic, non-Hispanic White, non-Hispanic Black, Asian/Other), education level, marital status, and PIR categories.

Results: The study included 2,102 adult participants, of whom 81 (3.85%) reported an insurance gap within the past year. Most participants identified a doctor's office or health center as their usual place of care (1,673; 79.6%), while 337 (16.0%) relied on urgent care or emergency departments and 92 (4.4%) reported using VA facilities. In the adjusted model, having an insurance gap was associated with a significantly greater likelihood of relying on urgent care or emergency departments rather than a doctor or health center (RRR 2.39, 95% CI 1.44 to 3.98, $p = 0.001$). The increased reliance on urgent or emergency care remained significant in multiple subgroups, including married or partnered adults (RRR 2.74, $p = 0.010$), high-income adults (RRR 4.18, $p = 0.005$), and non-Hispanic Black individuals (RRR 4.63, $p = 0.007$).

Conclusion: A temporary lapse in insurance coverage, even within a single year, was strongly associated with shifting care away from stable outpatient settings toward urgent care and emergency departments. This pattern suggests that coverage gaps may lead to more severe or urgent healthcare needs and contribute to greater healthcare resource use at both the individual and system levels. The effect was most pronounced in racial and ethnic minority groups, and importantly, higher-income adults were not protected. The association persisted even among those with greater financial resources, indicating that short-term insurance disruptions create vulnerabilities that cut across socioeconomic lines. These findings highlight that continuous insurance coverage is an essential determinant of healthcare stability and that preventing temporary lapses may reduce avoidable reliance on acute care services.

# ORAL ABSTRACT PRESENTATIONS

# Cardio-Pulmonary Amyloidosis: A Rare Cause of Dyspnea

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Background: Amyloidosis is a disease characterized by the accumulation of protein fibrils across the body leading to a wide range of clinical presentations. It can be primary or secondary, related to chronic infection, inflammation or malignancy. Pulmonary amyloidosis is a rare disorder that occurs either as part of systemic amyloidosis or limited to the lung. Diagnosis is often difficult as clinical and radiological features are vague and variable often with limited treatment options.

Case Presentation: A 77-year-old man with a past medical history of atrial fibrillation with history of amiodarone use, heart failure, 2nd-degree AV block with pacemaker, prior VSD repair in childhood, interstitial lung disease, coming in with recurrent hypoxic respiratory failures and progressive dyspnea over 18 months. Patient had multiple admissions treated for HF exacerbations and ILD exacerbations with mild response to diuretics and prednisone. Extensive workup done including a high-resolution CT of the chest demonstrating diffuse ground-glass opacities (GGOs), interlobular septal, diffuse bronchial wall thickening without honeycombing or traction bronchiectasis. Autoimmune serologies were negative except for rheumatoid factor, and hypersensitivity panels were unremarkable. Pulmonary function tests revealed a mild restrictive pattern. Echocardiogram revealed a normal LVEF, increased LV and RV wall thickness, moderate RV dysfunction, and elevated estimated RVSP consistent with pulmonary hypertension. Right and left heart catheterization showed normal filling pressures, shunt study with minimal shunt from residual VSD. Technetium-99m pyrophosphate scintigraphy demonstrated grade 3 myocardial uptake, and endomyocardial biopsy confirmed wild-type ATTR amyloidosis (TTR gene negative). The CT scan findings persistent despite appropriate diuresis and a prednisone taper. The discordance between extensive radiographic parenchymal disease and only mild physiologic impairment like normal filling pressure and mild restrictive pattern on PFT raised suspicion for pulmonary amyloid deposition rather than primary ILD or amiodarone toxicity. Bronchoscopic biopsy was deferred given frailty and limited clinical utility. Patient was started on acoramidis (Attruby) with reported functional improvement and no oxygen requirement on follow-up.

Discussion: Pulmonary amyloidosis is common but is mostly asymptomatic. It mimics other diseases like ILD and cancer. Definitive diagnosis requires a tissue biopsy confirming amyloid deposition with congo red staining. Given the wide spectrum of radiographic patterns and overlapping presentations, a multidisciplinary approach is essential to distinguish localized from systemic disease, as treatment strategies and prognosis differ substantially.

# Residents as Educators: A Resident-Driven Longitudinal Intern Bootcamp Curriculum

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Background: The transition from medical school to residency is a challenging and anxiety-provoking period. Incoming internal medicine interns exhibit significant variability in self-perceived confidence and preparedness for clinical practice. Traditional one-week orientation models often emphasize administrative onboarding rather than progressive clinical development. Near-peer instruction and longitudinal bootcamp curricula have demonstrated success in certain specialties; however, the educational impact of a resident-designed, needs-assessment-tailored longitudinal bootcamp model for internal medicine interns remains limited.

Objectives: The primary objective is to evaluate changes in interns' self-perceived confidence across core internal medicine practice domains following participation in a senior resident-led longitudinal bootcamp. Secondary objectives were to assess interns' perceptions of the longitudinal and resident-led instructional format, and to advance senior residents' skills as educators and leaders through a near-peer teaching model grounded in near-peer learning theory.

Methods: To tailor the new curriculum, a needs-assessment survey was distributed to all residents to identify deficiencies within the existing intern orientation curriculum. Senior residents used this data to design and implement a longitudinal curriculum delivered as eight forty-minute didactics, delivered weekly. Curricular content focused on laboratory interpretation, intensive care unit (ICU) fundamentals, recognition and initial management of common inpatient crises, inpatient clinical pathologies, and orientation to administrative tasks and navigating the electronic medical record (EMR). Incoming interns completed anonymous pre-intervention ($n = 16$) and post-intervention ($n = 18$) surveys assessing self-perceived confidence using five-point Likert scales (1 = strongly disagree, 3 = neutral, 5 = strongly agree) to various domains of clinical practice. Responses were anonymous and non-linked; thus, pre- and post-intervention survey data were analyzed as independent samples using two-tailed Mann-Whitney U testing with statistical significance defined as $p < 0.05$.

Results: Statistically significant improvements were observed with interns' self-perceived confidence in laboratory interpretation (mean 2.56 to 4.28, $p = 0.00001$) and in the recognition and initial management of acute crises (mean 1.88 to 3.44, $p = 0.0001$). In addition, confidence with management in the ICU improved from a median of 2 to 3 (mean 1.69 to 3.28, $p = 0.0001$), and confidence with managing common inpatient medical pathologies improved from a median of 3 to 4 (mean 2.88 to 4.06, $p = 0.00024$). Finally, global confidence in patient care increased from a median of 2 to 5 (mean 2.00 to 4.67, $p = 0.00001$).

No statistically significant improvement in confidence was observed for administrative or electronic medical record-related tasks (median 2 to 3; mean 2.38 to 2.88; $p = 0.1096$). Following completion of the curriculum, 100% of interns agreed that the longitudinal format was superior to the traditional one-week orientation, and 100% preferred the resident-led instructional model over the conventional faculty-led model. Qualitative feedback highlighted the high perceived relevance of topics chosen and the efficacy of the near-peer teaching model.

Conclusion: A senior resident-led, longitudinal intern bootcamp was associated with significant improvements in intern confidence across multiple domains, highlighting the efficacy of a near-peer learning model and areas for improvement in future curricula.

# Renflexis-Associated Pauci-Immune Crescentic Glomerulonephritis: A Rare Cause of Rapidly Progressive Kidney Failure

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We present the case of a 46-year-old Pacific Islander male with a history of gout, chronic kidney disease stage G3 A1, and psoriasis who recently switched from treatment with infliximab to infliximab-abda (Renflexis) who presented with three days of decreased urine output and diffuse joint pain distinct from prior gout flares. He also reported dark-colored urine and right flank pain but denied fever, respiratory, or cardiac symptoms. On examination, he had warmth and tenderness of multiple small joints, limited painful motion of the left shoulder and right elbow, and a morbilliform rash. Vital signs were stable.

Laboratory evaluation revealed stage 3 acute kidney injury superimposed on chronic kidney disease, and urine microscopy showed frequent dysmorphic red blood cells. Complement levels, infectious and autoimmune serologies, and serum and urine protein electrophoresis were all normal. Renal biopsy showed pauci-immune crescentic glomerulonephritis with segmental necrosis, 30% cellular crescents, weak C3 and IgA deposition, and 30% interstitial fibrosis/tubular atrophy, as well as 25% global glomerulosclerosis. The overall findings were consistent with rapidly progressive pauci-immune crescentic glomerulonephritis. Given the temporal relationship to Renflexis initiation 21 days before symptom onset and absence of infection, other medication changes, systemic autoimmune disease, or ANCA positivity, the etiology was attributed to infliximab-abda–induced rapidly progressive glomerulonephritis (RPGN).

The patient was started on pulse dose corticosteroids followed by weigh- based taper per the PEXIVAS trial, as well as renally dosed IV cyclophosphamide (7.5 mg/kg every two weeks). He was discharged with a plan for six induction cyclophosphamide infusions, and he demonstrated improving renal function over the following weeks. Treatment was discontinued after three infusions, due to recovery and plateau at a new baseline eGFR of 40 mL/min/1.73m2.

RPGN is a rare but life-threatening renal complication of TNF-α inhibitors. To our knowledge, pauci-immune RPGN associated with infliximab-abda has been infrequently reported, especially in the setting of long-term stability on infliximab prior to switching to infliximab-abda. This case underscores the importance of vigilance for renal toxicity in patients receiving TNF-α inhibitors and their biosimilars, as prompt recognition and aggressive immunosuppression are critical for preservation of renal function.

# Quintuple Therapy for Severe Refractory Orthostatic Hypotension

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Introduction: Orthostatic hypotension (OH) is a reduction of systolic blood pressure (SBP) by >20 mmHg or of diastolic BP (DBP) by >10 mmHg within the first three minutes of standing or head-up tilt on a tilt table. Treatment is aimed at preventing or alleviating symptoms affecting daily function, rather than achieving a target blood pressure. Nonpharmacologic measures such as dietary changes and compression devices are first-line, while pharmacologic intervention is reserved for persistent symptoms despite lifestyle interventions. Here, we present a challenging case of severe refractory OH requiring quintuple therapy.

Case Description: A 59-year-old male with a history of poorly controlled type 1 diabetes presented with diabetic ketoacidosis (DKA) and was incidentally found to have severe OH during admission. Orthostatic vitals were first positive on day 6 with complaints of dizziness, vertigo, and black "spots" in his visual field with positional changes that resolved after rest. His physical exam was otherwise normal. Due to profound OH (drop in SBP >30 mmHg with symptoms), initial intervention consisted of compression stockings and midodrine 20 mg QID.

Persistent OH symptoms and vitals on day 8 prompted the addition of droxidopa 100 mg TID. On day 12, the patient was still moderately symptomatic, therefore, droxidopa was increased, fludrocortisone 0.1 mg qd was initiated, and bilateral leg ACE wraps and an abdominal binder were added. Due to minimal improvement, midodrine and droxidopa were uptitrated on day 13. On day 14, per pharmacy recommendations, droxidopa dose was maxed at 600 mg TID, and midodrine and fludrocortisone were increased to supratherapeutic doses of 40 mg QID and 0.2 mg qd, respectively. Following this change, the patient progressed from a two-person assist to a one-person assist when ambulating on day 15. Pyridostigmine 60 mg Q8H was added on day 16. Over the next two days, both the patient's ambulation and vitals improved. Since OH vitals were still positive, but borderline, discharge instructions on day 20 specified to take midodrine, droxidopa, fludrocortisone, and pyridostigmine as previously directed with the addition of atomoxetine for SBP <120 mmHg. At the time of discharge, the patient admitted his symptoms were much improved and he was able to achieve greater distances in ambulation.

Of note, the patient's DKA resolved over the course of admission after initiating insulin and bicarbonate drips. Due to symptomatic OH, discharge was delayed until management was optimized. The patient was discharged to a short-term rehab facility for step-down management of both diabetic regimen optimization and OH monitoring.

Discussion: Current treatment of symptomatic OH targets volume expansion and increasing vascular resistance with the ultimate goal of improving quality of life and reducing mortality. Our patient's history suggests diabetic autonomic neuropathy as the primary etiology behind his presentation. The acute development of DKA likely overwhelmed our patient's baroreflex, resulting in severe refractory OH due to the coupling of autonomic dysfunction with severe volume depletion. For patients who develop severe refractory OH, this case highlights a successful treatment approach with graduated quintuple therapy.

# A phone call away: Do Geriatric Registered Nurse phone calls reduce healthcare utilization?

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Introduction: Older adult patients, especially those living with dementia, have increased healthcare utilization and require complex coordination of care. Given the shortage of physicians and geriatricians, interdisciplinary teams that include registered nurses (RNs) can help support these patients and their caregivers.

Objective: This study sought to determine if there was a decrease in healthcare utilization 6 months before and 6 months after Geriatric RN telephone calls.

Methods: A convenience sample of 53 Geriatric RN phone calls conducted over a 50-day period (September–November 2022) was randomly selected. Calls ranged from 5 to 56 minutes in duration (mean 21 minutes). For each call, details of healthcare utilization 6 months before and 6 months after the call were entered securely into the Research Electronic Data Capture (REDCap) database. Utilization included inpatient hospitalizations, nursing facility admissions, emergency room (ER), home health care, and outpatient visits. For each acute care utilization (ER visits and hospitalizations), the diagnoses and dates of admission and discharge were recorded. For each outpatient visit, the department (Primary, Specialty, or Urgent Care), provider, whether dementia was documented in the encounter, and caregiver involvement in the encounter were recorded. Social work encounters and hospice referrals were also recorded. Primary reasons for calls included behavior management (30.2%) and medication management (28.3%), with caregiver support documented in all calls.

Descriptive statistics, paired t-tests, and chi-squared tests were used to analyze changes.

Results: The mean duration of each RN call was 21 minutes (range: 5–56). The duration of the call was not associated with reductions in healthcare utilization. Outpatient visits (mean 11.4 visits before, 9.28 visits after; $p=0.02$) were the only type of utilization that decreased significantly. Decreases occurred across all outpatient visit types: Specialty Care decreased from 450 to 372 visits (−78 visits, −17.3%), Primary Care from 126 to 96 visits (−30 visits, −23.8%), and urgent care from 28 to 24 visits (−4 visits, −14.3%). There was no type of healthcare utilization increased after Geriatric RN phone calls. Dementia documentation decreased (50.8% before, 47% after; $p=0.0497$) and caregiver involvement increased (66.8% before, 70.2% after, $p=0.0497$) in outpatient visits after the Geriatric RN phone calls. Overall ER visits did not significantly change (mean 1.23 before vs. 1.11 after; $p=0.224$), but the proportion of preventable ER visits increased from 3.1% to 11.9%, primarily UTI-related. Hospice enrollment increased markedly (3 patients before vs. 21 after; +600%).

Conclusion: Geriatric RN phone calls were associated with a significant reduction in outpatient visits, with decreases across specialty, primary, and urgent care. Although overall ER visits and hospitalizations did not significantly change, the non-preventable ER visits decreased, whereas the preventable ER visits—primarily UTI-related— increased. This suggests an opportunity for targeted interventions. Lower dementia documentation after RN calls may reflect improved management during RN calls but warrants further study. Hospice enrollment increased substantially, indicating potential impact on end-of-life care planning. Despite a small sample size, these findings suggest that Geriatric RN phone calls did not increase healthcare utilization and may help reduce outpatient visits while supporting care transitions.

# Urinary Tract Infections and Delirium in Older Adults: An Umbrella Review of the Association, Diagnostic Challenges, and Clinical Implications

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Introduction: Urinary tract infections (UTIs) are among the most common causes of bacterial infections in older adults. It is a significant cause of morbidity, hospitalization, and healthcare costs in this population. Diagnosing UTIs in older adults is challenging due to atypical presentations and high rates of asymptomatic bacteriuria. Delirium, an acute neuropsychiatric syndrome characterized by altered attention and cognition, frequently complicates infection in this population. The relationship between UTIs and delirium remains uncertain, as diagnostic criteria vary across studies. This umbrella review aimed to synthesize existing systematic reviews evaluating (1) the association between UTI and delirium in older adults, and (2) the diagnostic value of clinical signs of UTI in this population.

Methods: This umbrella review followed the Joanna Briggs Institute (JBI) methodology for evidence synthesis and adhered to PRISMA guidelines. We performed a comprehensive search across PubMed, Web of Science, Embase, Google Scholar, EBSCO, Cochrane Library, and Prospero from 1990 to August 2025. Inclusion criteria were systematic reviews, meta-analyses, and scoping reviews evaluating adults aged ≥65 years. We conducted the Quality assessment using the JBI Critical Appraisal Checklist for Systematic Reviews, and measured study overlap using the Corrected Covered Area (CCA) method.

Results: Of 219 identified studies, six systematic reviews met the inclusion criteria. Four were conducted in the United States and two in Europe. Three reviews demonstrated a significant association between UTI and delirium, with one reporting an odds ratio (OR) of 2.67 (95% CI 2.12–3.36, $p < 0.001$; $I^2 = 60.49\%$). Approximately 26–32% of delirium patients had UTIs, while 30–35% of UTI patients developed delirium. Heterogeneity was high but decreased in subgroup analyses using DSM or ICD criteria for delirium. Only one review assessed diagnostic accuracy, identifying urinary incontinence, dysuria, and hematuria as predictors of UTI in men, while frequency, dysuria, and cloudy urine were predictive in women. Additionally, the inability to perform several activities of daily living was a predictor of UTI. The mean JBI quality score was 7.1/11, and CCA was 7.4%, indicating moderate overlap across reviews.

Discussion: Findings confirm an association between UTI and delirium in older adults, likely mediated by systemic inflammation and neuroinflammatory pathways. However, causality cannot be inferred from the observational nature of the available evidence evaluated in the systematic reviews in this study; furthermore, diagnostic heterogeneity and inconsistent definitions limit interpretability.

Conclusion: UTIs and delirium frequently present together in older adults, but the causal link remains unclear. Conventional urinary symptoms are unreliable in this population. Future research should adopt standardized diagnostic criteria, clarify temporal relationships, and guide evidence-based management to reduce inappropriate antibiotic use and improve outcomes in elderly patients.

# An Unexpected Finding: Urothelial Carcinoma of the Bladder in a Renal Transplant Recipient

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Introduction: Malignancy is the third leading cause of death for renal transplant (RT) patients. Urothelial carcinoma remains a less common malignancy but with increased incidence amongst this population.

Case presentation: A 26-year-old male with end stage renal disease secondary to atypical hemolytic uremic syndrome s/p deceased renal transplant in 2015, complicated by IgA nephropathy on tacrolimus, mycophenolate, and prednisone, presented for acute kidney injury. He was in his usual state of health until he began to experience painless hematuria at home. His transplant nephrologist recommended hospitalization for concern of acute transplant rejection due to an increase in creatinine to 2.6 mg/dL from his baseline of 1.2 mg/dL. On admission, his creatinine was 1.9 mg/dL and tacrolimus level 8.2 ng/mL which was in the normal range, no BK viremia was present. A renal transplant ultrasound was done and incidentally demonstrated two solid masses within the bladder and a possible flow limitation in the graft's renal artery. Urology performed a cystoscopy revealing multifocal bladder tumors requiring transurethral resection. Pathologic testing revealed invasive high grade urothelial carcinoma with involvement of the muscularis propria and prominent lymphovascular invasion. Further staging demonstrated disease localized to the bladder alone. Radical cystectomy was recommended but the patient opted to pursue treatment with chemoradiation and further transurethral surgical management.

Conclusion: Solid organ transplantation is associated with an increased risk of post-transplant malignancy between 2-4 times greater than the general population with an incidence between 2-31% depending on cancer type. Skin cancer, renal cell carcinoma and post-transplant lymphoproliferative disease are common post-transplant malignancies diagnosed in the renal transplant population. This increased incidence is partly due to transplant and patient specific factors like set of immunosuppressive agents, immune suppression strength and any present oncogenic viruses. Bladder cancer, specifically urothelial carcinoma, is uncommon amongst RT recipients with an incidence of 0.4% although with a relative risk of 3.31 times higher than the general population with a tendency to present in younger ages. Non-muscle invasive bladder cancer (NMIBC) are found more often than muscle invasive bladder cancer (MIBC). Risk factors include immunosuppressive agents, particularly cyclophosphamide and cyclosporine, as well as oncogenic viruses, particularly BK virus. Presentation involves microscopic and gross hematuria but is largely asymptomatic with diagnosis involving bladder ultrasound followed by cystoscopy. Intra-vesical BCG and transurethral resection of bladder tumor (TURBT) is commonly used for NMIBC. Radical cystectomy is recommended in the case of MIBC such as our patient although with significant associated morbidity in light of RT and immunosuppression. Unfortunately, urothelial carcinoma is quite aggressive with some studies noting significant rates of recurrence and metastasis following initial treatment.

Our case highlights the importance of considering uncommon malignancies in RT recipients such as bladder cancer in cases of hematuria even with prior history of IgA nephropathy given an increased risk of occurrence as a result of long-term immunosuppression. Given its significant morbidity and high recurrence rate after treatment, frequent surveillance may be necessary.

# Cold Agglutinin Syndrome Secondary to Mycoplasma pneumoniae Infection in a Renal Transplant Recipient on Tacrolimus-Based Immunosuppression

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Cold agglutinin syndrome (CAS) are IgM autoantibody-mediated forms of hemolytic anemia leading to red cell agglutination and complement-dependent hemolysis. Although Mycoplasma pneumoniae is a well-recognized infectious trigger, its occurrence in immunocompromised adults, particularly solid organ transplant recipients, is poorly characterized. Of the handful of published cases of autoimmune hemolytic anemia following renal transplantation, infection-associated CAS in patients receiving tacrolimus-based immunosuppressive therapy is exceedingly rare. Our case represents, to the best of our knowledge, one of the only documented cases of Mycoplasma pneumoniae-associated CAS in an adult kidney transplant recipient. This highlights that infection-driven auto-antibody production can occur despite pharmacologic immunosuppression and may present without typical respiratory manifestations.

Case Presentation: A 45-year-old man with alpha thalassemia and end-stage renal disease secondary to diabetic nephropathy presented for routine six-month post-transplant follow-up after undergoing deceased donor renal transplantation. Two weeks prior, he had been hospitalized with sepsis and diagnosed with Mycoplasma pneumoniae pneumonia via bronchoalveolar lavage multiplex polymerase chain reaction (PCR). His maintenance immunosuppression included tacrolimus, mycophenolate mofetil, and prednisone. He resumed his maintenance immunosuppression on discharge.

He presented with symptoms of worsening fatigue but no fever, cough, dyspnea, bleeding, or gastrointestinal symptoms. On physical examination, jaundice, hepatosplenomegaly, or lymphadenopathy were not appreciated.

Laboratory evaluation showed severe normocytic anemia (hemoglobin 6.7 g/dL) with an elevated reticulocyte count and lactate dehydrogenase, but normal bilirubin and haptoglobin levels. A direct antiglobulin test was positive for C3 and negative for IgG, and cold agglutinin testing was positive. Mycoplasma pneumoniae IgM and IgG serologies were positive, with negative viral PCR studies for Parvovirus B19 and BK virus. Peripheral smear showed red cell agglutination without schistocytes.

He was diagnosed with CAS secondary to Mycoplasma pneumoniae infection and was treated with supportive transfusions, warming measures, and continuation of his immunosuppressive regimen. His hemoglobin and hemolysis markers subsequently normalized, while corticosteroids, rituximab, and plasmapheresis were not required given his clinical improvement. He was discharged on hospital day seven with no recurrence at follow-up.

Discussion: This case demonstrates that infection-triggered autoantibody production and complement-mediated hemolysis can occur in transplant recipients despite T and B cell suppression from tacrolimus and mycophenolate. It also documents that Mycoplasma pneumoniae associated-CAS can occur in renal transplant recipients under standard immunosuppression and can be effectively treated with antimicrobials and supportive measures alone. The patient's presentation without respiratory symptoms highlights the diagnostic challenge of atypical infections in immunosuppressed hosts and illustrates how common post-transplant etiologies of anemia, including chronic kidney disease, marrow suppression, or drug toxicity, may obscure ongoing hemolysis. Clinicians should maintain suspicion for CAS when anemia is accompanied by reticulocytosis or complement-positive direct antiglobulin testing to facilitate early diagnosis and prevent unnecessary modification of immunosuppressive regimens.

# Comparative Analysis of Inpatient Management of Hyponatremia: Outcomes and Strategies in the Intensive Care Unit versus Non-ICU Settings

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Rationale: Severe hyponatremia (sodium ≤125 mEq/L) is a common and dangerous electrolyte disturbance linked to high morbidity and mortality. Traditionally, these patients are managed in the ICU due to the need for close monitoring during sodium correction, yet no studies have evaluated the safety of treating severe hyponatremia outside the ICU. This retrospective study compares treatment strategies and complications of severe hyponatremia management between ICU and non-ICU settings.

Methods: This IRB-approved retrospective study analyzed adults admitted to Kaiser Moanalua (2018–2023) with ICD-10–coded hyponatremia and admission sodium <125 mEq/L. Chronic baseline cases were excluded. EHR data included admission location, sodium trends, demographics, Charlson comorbidity index (CCI), clinical complications, including osmotic demyelination syndrome (ODS), and over-correction (>8 mEq/24h). Manual chart review confirmed etiology, treatment strategy, use of D5W/desmopressin (DDAVP). Statistical analysis was conducted in SAS using parametric, nonparametric, and generalized linear models (alpha = 0.05).

Results: Of 1,048 admissions, 129 (14%) were ICU admissions. There was no difference in CCI between patients cared for in the ICU or non-ICU settings. ICU hypertonic (3%) saline use was higher (12.4% vs 2.9%, $p<0.0001$), though a numerically higher number of non-ICU patients received it (16 vs 27 in non-ICU). Overcorrection occurred in 31.8% of ICU and 28.1% of non-ICU patients ($p=0.3823$) with no confirmed ODS cases or related complications. Iatrogenic hypernatremia was more frequent in ICU (7.8% vs 0.9%, $p<0.0001$). Treatment with D5W or desmopressin was more frequent in the ICU versus non-ICU (32.6% vs 8.6%, $p<0.0001$). ICU patients had a longer median length of stay (8 vs 4 days, $p<0.0001$) and a longer median time to sodium normalization (82 vs 64 hours, $p=0.0068$).

Conclusions: This study supports the safety of managing severe hyponatremia outside the ICU, noting 86% of total severe hyponatremia admissions were successfully managed on non-ICU floors without increased complications. Hypertonic saline was frequently and safely administered outside the ICU. Sodium overcorrection was higher in the ICU, suggesting more conservative correction practices outside the ICU. No cases of ODS or treatment-related complications occurred in any setting. Other markers of overtreatment: iatrogenic hypernatremia, D5W/DDAVP use, and prolonged hospitalization were all significantly more frequent in ICU patients. These findings indicate that patients meeting criteria for severe hyponatremia were safely managed outside the ICU in our study with fewer complications, supporting the potential as a standard approach to preserve ICU resources.

# Efficacy of high-velocity nasal insufflation in the treatment for respiratory failure: systematic review and meta-analysis

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Background: High-velocity nasal insufflation (HVNI) is a high flow nasal cannula–based modality developed as an alternative to noninvasive positive pressure ventilation (NPPV) for acute respiratory failure with hypercapnia. HVNI may improve comfort by allowing communication and oral intake while providing adequate ventilatory support. Although recent randomized controlled trials (RCTs) have compared HVNI with NPPV, evidence has not been synthesized systematically. This review aimed to evaluate the efficacy and safety of HVNI compared with NPPV in adults with hypercapnic hypoxic respiratory failure.

Methods: We conducted a systematic review and meta-analysis following PRISMA 2020 guidelines and a preregistered protocol on the Open Science Framework. Randomized or cluster-randomized trials including adults (≥18 years) with hypercapnic respiratory failure were eligible. HVNI was compared with standard NPPV. Primary outcomes were treatment failure (all-cause mortality or unplanned intubation) and patient-reported comfort. Secondary outcomes included failure to oxygenate, failure to ventilate, and length of stay. Searches were performed in MEDLINE, EMBASE, Cochrane CENTRAL, ICTRP, and ClinicalTrials.gov without language restrictions. Two independent reviewers performed study selection, data extraction, and risk-of-bias assessment (RoB 2). Random-effects models were used. Certainty of evidence was rated using GRADE.

Results: Three RCTs (n=144) met inclusion criteria. Overall certainty of evidence ranged from low to very low. For treatment failure, pooled results from three trials showed no clear difference between HVNI and NPPV (RR 0.80, 95% CI 0.37–1.69; very low certainty). The anticipated risk difference was 5.0% fewer events with HVNI (15.8% fewer to 17.3% more). For comfort, one RCT (n=55) reported lower discomfort scores in the HVNI group (MD –23.12, 95% CI –38.36 to –7.88; low certainty). In the same study, discomfort was reported in 8/16 patients receiving NPPV and 1/12 receiving HVNI. For length of stay, two trials (n=76) showed no clear difference (MD –1.05 days, 95% CI –2.31 to 0.21; very low certainty). For failure to oxygenate, one RCT (n=46) showed a possible reduction with HVNI (5.0% fewer events; 95% CI –16.0% to 0.7%; low certainty). For failure to ventilate, data from one trial (n=46) were uncertain (RR 0.27, 95% CI 0.03–2.26; low certainty). Adverse events were rarely reported; only one study documented no adverse events, and others did not report safety outcomes (low certainty).

Conclusion: Evidence from a small number of RCTs suggests that HVNI provides similar rates of treatment failure compared with NPPV and may improve patient comfort in hypercapnic hypoxic respiratory failure. However, certainty of evidence is low to very low due to small sample sizes, risk of bias, and limited reporting of secondary outcomes. More robust trials are needed to clarify the comparative effectiveness and safety of HVNI for the treatment of acute hypercapnic hypoxic respiratory failure.

# Preserving Inpatient Education in the Era of X+Y Scheduling: A Pre–Post Study in Internal Medicine Training

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Background: Many internal medicine residency programs in the United States have transitioned from traditional schedules to X+Y block scheduling, in which residents alternate between fixed inpatient ("X") and ambulatory or elective ("Y") blocks. This model aims to improve resident wellness, outpatient education, and continuity of care by reducing conflicts between inpatient and outpatient responsibilities. While prior studies have reported improvements in well-being and outpatient learning under X+Y scheduling, its impact on inpatient education has not been well characterized. Understanding whether this schedule supports or compromises inpatient teaching is critical for programs considering or refining X+Y implementation.

Objective: To evaluate changes in inpatient teaching activities and perceptions of educational quality, well-being, and workflow stress among residents and faculty following implementation of a 4+2 X+Y schedule.

Methods: This cross-sectional pre–post survey was conducted at the University of Hawai'i Internal Medicine Residency Program, which transitioned from a traditional schedule to a 4+2 X+Y model in July 2024. Eligible participants were residents and inpatient attendings (hospitalists and intensivists) who had experienced both schedules. Anonymous surveys were distributed electronically from May 14, 2025 to May 30, 2025. Response rates were 74% (28/38 residents) and 59% (19/32 faculty). Primary outcomes were duration of didactic lectures, bedside rounds, and table rounds, rated on ordinal time scales. Secondary outcomes included schedule preference. Paired t-tests were used for pre–post comparisons with $\alpha = 0.05$.

Results: Among residents, didactic time increased from $2.94 \pm 0.75$ to $3.12 \pm 0.60$ ($p = 0.083$), bedside teaching from $3.35 \pm 0.93$ to $3.41 \pm 0.80$ ($p = 0.579$), and table rounds were unchanged ($2.65 \pm 0.49$; $p = 1.000$). Among hospitalist faculty, didactic teaching time increased significantly from $1.55 \pm 0.69$ to $2.27 \pm 0.65$ ($p = 0.039$), while bedside and table-round durations did not differ significantly. Intensivists showed no significant changes. When data from all faculty were pooled, mean changes in didactics ($p = 0.082$), bedside teaching ($p = 0.082$), and table rounds ($p = 0.77$) were not statistically significant. Both residents and hospitalists rated the X+Y schedule as less stressful than the traditional model ($p = 0.02$ and $p = 0.00057$, respectively).

Discussion: The transition to a 4+2 X+Y schedule preserved inpatient teaching time and was associated with increased hospitalist-led didactics and improved perceptions of wellness and educational quality. The X+Y model's separation of inpatient and ambulatory duties likely reduces schedule fragmentation, allowing more focused teaching interactions and cohesive team dynamics. Differences between hospitalist and intensivist responses may reflect structural variability in workflow flexibility across clinical settings. Although limited by self-reported data, single-center design, and modest sample size, the study's findings suggest that X+Y scheduling can enhance educational satisfaction without compromising inpatient teaching.

Conclusions: Implementation of a 4+2 X+Y schedule maintained inpatient educational quality and improved perceptions of well-being and teaching engagement among residents and faculty. The findings support X+Y scheduling as a balanced framework for promoting resident education and resident and faculty wellness. Future multi-center studies incorporating objective measures of educational outcomes and patient care metrics are warranted.

# A minor dog bite, A major infection: Fulminant Capnocytophaga sepsis

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Background: Capnocytophaga canimorsus, found in over two-thirds of canine oral flora, has been a well-recognised cause of infections in immunocompromised adults. We present a case of complicated fulminant C. canimorsus sepsis in an immunocompetent adult highlighting the diagnostic challenges and rapid clinical deterioration associated with this infection.

Case Report: A 65-year-old previously healthy male presented to the emergency department with severe acute encephalopathy and high-grade fever (105°F). On arrival, the patient demonstrated inability to protect his airway and septic shock, requiring emergent intubation and mechanical ventilation. Initial examination revealed a healing wound on the right fourth finger, later clarified on history from a minor dog bite three days prior to presentation. The patient received sepsis treatment bundle including broad-spectrum penicillin-beta-lactamase inhibitor combination therapy, aggressive fluid resuscitation, and vasopressor support. Extensive diagnostic workup including imaging and lumbar puncture was unable to identify specific infectious focus.

On day 2 of admission, the patient developed progressive multi-organ failure including Disseminated Intravascular Coagulation (DIC), septic cardiomyopathy, acute liver failure, and acute renal failure requiring Continuous Renal Replacement Therapy. On hospital day 3, the patient developed worsening purpura fulminans, necessitating transfer to the Burn Center ICU. The blood cultures grew C. Canimorsus after prolonged incubation on day 5 of admission. Unfortunately, the patient's course continued to be complicated by multisystem failure and the family elected for comfort-focused care with the patient passing on day 15 of hospitalization.

Discussion: Studies such as the French CANCAN have documented a 2.5-fold increase from 2009 to 2018 in Capnocytophaga infections, a substantial proportion of which are in individuals lacking classic risk factors like asplenia, history of alcohol abuse or immunocompromise. A shorter incubation interval of less than three days strongly predicts sepsis on admission, likely reflecting a higher inoculum or more virulent strains. Early wound cleansing and prompt empiric therapy with a penicillin/beta- lactamase-inhibitor combination independently reduces mortality; however minor bites from vaccinated pets in rabies-free areas might be initially overlooked due to lack of awareness about Capnocytophaga infections in the general public.

The organism's fastidious nature frequently delays culture positivity until 3-5 days, as in our case, underscoring the utility of molecular techniques such as 16S rRNA PCR which can get earlier diagnostic results and guide targeted therapy. Earlier results may avoid unnecessary testing for other infectious sources and also allow clinicians to anticipate and manage common complications, including DIC, acute renal failure, and purpura fulminans.

Conclusion: The rising incidence of C. canimorsus sepsis in immunocompetent hosts demands increased clinical vigilance after any dog contact, even in the absence of traditional risk factors. A short incubation period should alert clinicians to the possibility of high-grade infection and prompt early wound cleansing, broad-spectrum antibiotic therapy, and consideration of molecular diagnostic techniques to expedite confirmation. Primary care practitioners should educate pet owners and the general public about the potential severity of C. Canimorsus infection to encourage early medical evaluation after dog bites.

# System-level and Patient-Level Determinants of In-Hospital Mortality Among Patients With STEMI and NSTEMI in Hawai‘i

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Background: Myocardial infarction (MI) is a major cause of morbidity and mortality in Hawai‘i, where geography and resource distribution may influence access to timely cardiovascular care. Understanding patterns of mortality for non-ST-elevation myocardial infarction (NSTEMI) and ST-elevation myocardial infarction (STEMI) is critical for identifying preventable inequities within the healthcare landscape.

Objective: Evaluate patient-level and system-level factors associated with in-hospital mortality among adults hospitalized with NSTEMI and STEMI in Hawai‘i, using multivariable logistic regression to identify independent predictors of death and disparities across demographic and geographic subgroups.

Methods: We performed a retrospective observational analysis of MI discharges in the Laulima Inpatient Database from 2016–2023, which captured all myocardial infarction hospitalizations statewide. NSTEMI and STEMI were identified using ICD-10 codes. The primary outcome was in-hospital mortality for first-ever MI hospitalizations during the study. Multivariable logistic regression identified independent predictors of mortality. Covariates were selected based on clinical relevance and associations with MI outcomes. The model estimated adjusted odds ratios (aORs) and 95% confidence intervals (CIs) for mortality as a function of age, county of residence, primary payer, admission type, Charlson Comorbidity Index (CCI), race, principal procedure with percutaneous coronary intervention (PCI), principal procedure with coronary artery bypass graft (CABG), length of stay (LOS), and socioeconomic status within the Social Vulnerability Index at the ZIP Code Tabulation Area level (SES). Sensitivity tests were conducted by using a variable for principal procedure type instead of PCI and CABG.

Results: We identified 11,071 NSTEMI and 3,882 STEMI hospitalizations. In-hospital mortality was 4.6% for NSTEMI and 11% for STEMI. For STEMI, age ≥75 years was associated with higher mortality compared with age 18–44 (aOR 2.08, 95% CI 1.08–4.19). Public insurance was associated with increased mortality: Medicare (aOR 1.86, 95% CI 1.25–2.81) and Medicaid (aOR 1.66, 95% CI 1.14–2.43), compared with private insurance. Patients with CCI ≥5 points had increased mortality compared with those with 0 points (aOR 2.08, 95% CI 1.41–3.11). Emergency admission increased mortality risk (aOR 1.55, 95% CI 1.02–2.39), while LOS of 3–7 days was associated with lower mortality (aOR 0.36, 95% CI 0.27–0.47). CABG (aOR 0.13, 95% CI 0.05–0.31) and PCI (aOR 0.18, 95% CI 0.14–0.24) were associated with lower mortality. Race, sex, and SVI were not significant predictors.

Predictors for NSTEMI were similar. Age ≥75 years, public insurance, higher CCI scores, and emergency admission were associated with increased mortality. Residence in Hawai‘i County was associated with higher mortality compared with residence in Honolulu County. LOS of 3–7 days was associated with lower mortality. Race, sex, and SES were not significant predictors. Sensitivity analyses produced similar findings, although associations for Hawai‘i County varied between models.

Discussion: In this statewide analysis, age, insurance status, comorbidity burden, and emergency admission were independently associated with increased in-hospital mortality for both STEMI and NSTEMI. Geographic variation, particularly higher mortality among NSTEMI patients in Hawai‘i County, suggests that access to cardiac care may influence outcomes. These findings highlight opportunities to strengthen access to cardiac care across Hawai‘i and inform system-level interventions to reduce MI-related mortality.

# Extreme Lipoprotein(a) Elevation Presenting as Systemic Arterial Thrombosis Without Atherosclerosis: A Case Report

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Background: Lipoprotein(a) (Lp(a)) is a genetically determined, independent risk factor for atherosclerotic cardiovascular disease (ASCVD), including coronary artery disease, ischemic stroke, and peripheral arterial disease. Approximately 20% of the population has elevated Lp(a) levels, with risk increasing proportionate to concentration. Evidence suggests that extreme Lp(a) elevations may promote thrombosis independently of plaque rupture or systemic inflammation. We report a patient with a markedly elevated Lp(a) level of 465 nmol/L who developed simultaneous multivessel arterial thrombosis despite minimal atherosclerotic disease, highlighting a potential role for Lp(a) in prothrombotic states.

Case Description: A 46-year-old woman with Lynch syndrome, a history of bilateral breast cancer, hyperlipidemia, and active tobacco use presented with acute-onset left-sided weakness and limb pain. Examination revealed decreased strength in the left upper and lower extremities and absent bilateral pedal pulses. Computed tomography angiography (CTA) demonstrated bilateral popliteal artery occlusions, a nonocclusive thrombus in the left subclavian artery, and a right M3 middle cerebral artery occlusion. Emergent thrombectomy resulted in near-complete recovery, with angiography revealing non–flow-limiting stenosis of the left common carotid artery. Laboratory evaluation revealed an Lp(a) level of 465 nmol/L with normal protein C, protein S, antithrombin III, and antiphospholipid antibody profiles. She was heterozygous for factor V Leiden but had no prior thrombotic manifestations and no evidence of active malignancy after extensive workup. Prior abdominal CTA showed mild thoracic aortic narrowing. She was discharged on apixaban but developed recurrent left arm weakness 11 days later, with MRI showing a new right midbrain infarct. No angiographic evidence of plaque rupture nor embolic source was identified. She was switched to warfarin and has remained event-free for 12 months, aside from a transient episode of weakness, where imaging was negative for recurrent stroke.

Discussion: This case underscores the potential for extreme Lp(a) elevation to cause arterial thrombosis through hypercoagulable and antifibrinolytic mechanisms independent of atherosclerosis. The apolipoprotein(a) moiety shares approximately 80% homology with plasminogen, competitively impeding plasminogen activation, thereby impairing both plasmin generation and fibrinolysis. Additionally, Lp(a) preferentially carries oxidized phospholipids promoting endothelial inflammation and induces tissue factor and plasminogen activator inhibitor-1 activity, further enhancing thrombus formation. In this patient, heterozygous factor V Leiden mutation, prior malignancy in the setting of Lynch syndrome, and ongoing tobacco use likely fostered a prothrombotic state. These risk factors, combined with Lp(a)-mediated antifibrinolytic effects, contributed to extensive thromboses. The patient's recurrence on apixaban but stability on warfarin suggests that vitamin K antagonists may offer superior protection in states of excessive thrombin generation by the non-specific suppression of multi
ple vitamin K–dependent clotting factors. No comparative data exist between direct oral anticoagulants and warfarin in Lp(a)-mediated arterial thrombosis, presenting an important evidence gap. While anticoagulation is not routinely recommended for significantly elevated Lp(a), long-term warfarin therapy may be justified in select patients with multiple risk factors for thrombosis. Early recognition of elevated Lp(a) in those with a personal or family history of arterial thrombosis may promote therapeutic apheresis, proprotein convertase subtilisin/kexin type 9 inhibitors, or cholesterol-lowering small interfering RNA conjugates.

# Coronary Calcification Score Predicts Twenty-Year Mortality in Older Japanese-American Men: The Kuakini Honolulu Heart Program

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Background: Coronary artery calcium (CAC) reflects presence of coronary atherosclerosis and is validated as an independent predictor of cardiovascular disease (CVD) morbidity and mortality in young and middle-aged adults. There have been few studies over age 85 or in Asian-ancestry populations. We examined CAC and 20-year all-cause mortality in older Japanese-American men.

Methods: The Kuakini Honolulu Heart Program is a longitudinal study of 8,006 Japanese-American men followed since 1965. In Exam 9 (2004–05), 224 participants with good cognitive function, aged 84-95 years underwent standardized multislice CT scanning to measure CAC. All-cause mortality data were available for 20 years, through December 2024. Co-variates included age, baseline CVD risk factors and prevalent chronic diseases. We used 5 CAC groups (scores 0, 1-99, 100-399, 400-999, >1,000) and quartiles for analysis.

Results: There were 3.6% men with CAC=0 and 31.7% with CAC >1,000. Age-adjusted death rates increased across CAC groups from 76.9 (CAC=0) to 141.9 (CAC>1,000) per 1,000 person-years follow-up, p for trend=0.02; similar dose-response relationships were observed across CAC quartiles (108.8-147.5; p for trend=0.001). In multivariate Cox regression models with lowest CAC as reference, those in the 2 highest CAC groups had over two-fold higher mortality (CAC=400-999: RR=2.28, 95%CI=1.04-5.01, p=0.04; CAC>1,000: RR=2.42, 95%CI=1.09-5.35; p=0.03). Similar dose-response associations were seen for CAC quartiles.

Conclusions: Higher CAC was a strong, independent risk factor for 20-year all-cause mortality in older Japanese-American men. A single CAC assessment after age 80 offers meaningful insight into future mortality risk and may aid late-life risk stratification and patient counseling.

# GABAA Receptor Encephalitis Masquerading as Persistent Focal Motor Status: A Case of Prolonged Refractory Status Epilepticus

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Introduction: Autoimmune encephalitides are characterized by immune-mediated neuroinflammation and are generally split into two main categories: intracellular antigen targets (e.g. anti-Hu or anti-Yo), which are often paraneoplastic, versus cell-surface/synaptic protein targets (e.g. anti-NMDAR), which cause neuronal dysfunction that often responds well to immunotherapy. There have been additional advances in the field of autoimmune encephalitides since the discovery of anti-NMDAR encephalitis in the early 2000s, including discovery of novel auto-antibody targets, such as the GABAA receptor (GABAAR), first recognized as a distinct subtype in 2014. This rare condition, with an estimated incidence of 1.5 per 1,000,000 per year, affects a wide age range with a median age of onset of 47 years and can present with several diverse phenotypes.

Case Presentation: We present the case of a 49-year-old right-handed male with a history of hypertension, CKD 3A, orogenital herpes simplex virus (HSV), and recent familial stressors who presented to the ER with new headaches and right lower extremity (RLE) paresthesia followed by involuntary RLE shaking. He was given a presumptive diagnosis, after a negative initial workup including basic lab studies and a head CT, of conversion disorder and was discharged home.

Three days later, he became encephalopathic with right hemineglect, rightward neck turning, and worsened RLE myoclonus. His hemineglect and neck automatisms improved with benzodiazepines and evetiracetam, though his RLE myoclonus persisted. MRI revealed T2/FLAIR hyperintensities in the left inferior frontal lobe, left superior and middle temporal gyri, and left temporal lobe with suggestion of cortical ribboning. Lumbar puncture noted lymphocytic pleocytosis (WBCs 78), erythrocytosis (RBCs 3,000), elevated protein (98), and a glucose of 68. Empiric antibiotic and antiviral therapy were initiated while awaiting additional
CSF testing.

His RLE myoclonus persisted, consistent with epilepsia partialis continua (EPC). Continuous electroencephalogram (cEEG) revealed left temporal periodic lateralized epileptiform discharges (PLEDs) and subsequent non-convulsive status epilepticus (NCSE). He developed worsening encephalopathy with escalating benzodiazepine requirements despite maximal doses of levetiracetam, lacosamide, and gabapentin – ultimately requiring intubation to facilitate additional sedation and anti-epileptics to achieve burst suppression.

CSF analysis for HSV and Creutzfeldt-Jakob disease (CJD) were negative but eventually revealed GABAAR autoantibodies. CT chest, abdomen, and pelvis with PET-CT were negative for paraneoplastic etiology. Intravenous courses of methylprednisolone and immunoglobulins (IVIg) did not lead to improvement. He underwent five cycles of plasma exchange and two subsequent rituximab infusions before ultimately improving to tracheostomy decannulation and hospital discharge.

Discussion: GABAAR encephalitis leads to antibody-mediated neuronal hyperexcitability that is often accompanied by cognitive decline or psychotic episodes, which can lead to initial psychiatric misdiagnoses. It is also further characterized by distinct multifocal cortical/subcortical MRI hyperintensities that can mimic those of CJD. While refractory seizures are common in GABAAR encephalitis – 82% of patients develop seizures, of which 42% have status epilepticus – presentation with sustained EPC is exceedingly rare and without any defined frequency.

Diagnosis remains a challenge due to low clinical awareness and symptom overlap with infectious or other autoimmune etiologies, highlighting the importance of considering GABAAR encephalitis in any patient with progressive neuropsychiatric symptoms.

# Skin Prick Testing after Anaphylaxis to Triple-Antibiotic Ointment Identifies Bacitracin as Causative Agent

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Introduction: Topical antibiotic ointments are widely used for the prevention and treatment of cutaneous infections. Although contact dermatitis reactions are common, systemic reactions to topical application of antibiotic ointments are exceedingly rare. We report a case of anaphylaxis following topical application of triple-antibiotic ointment. Subsequent skin prick testing identified bacitracin as the likely causative agent.

Case Description: A 66-year-old Asian male with no significant past medical history initially presented for a localized rash that lasted 1-2 weeks following the application of topical mupirocin and Neosporin (neomycin, bacitracin, and polymyxin B) to a small cut, leading to a presumed diagnosis of contact dermatitis. One month later, he sustained an open wound on his toe while surfing. He applied a triple-antibiotic ointment (neomycin, bacitracin, and polymyxin B) after wiping his wound with an antiseptic towelette containing benzalkonium chloride (BZK) and iodine. Within 15 minutes, he developed diffuse hives, pruritus, erythema, lightheadedness, and hazy vision. EMS found him to be hypotensive (BP 66/40). Intramuscular epinephrine was administered, with prompt resolution of symptoms. Six weeks after his reaction, we performed allergy skin prick testing to several topical antibiotics: four brands of triple-antibiotic ointment (neomycin, bacitracin, polymyxin B), one brand of double-antibiotic ointment (bacitracin, polymyxin), two brands of bacitracin, neomycin, mupirocin, a BZK antiseptic towelette, and iodine, as well as a positive histamine control and a negative saline control. Skin prick testing was positive to 6 of 7 preparations containing bacitracin, while all preparations lacking bacitracin were negative. Therefore, bacitracin was determined to be the culprit substance.

Discussion: Systemic reactions to topical antibiotics are uncommon despite their frequent clinical use. Of topical antibiotics, bacitracin has been most frequently associated with anaphylactic reactions. In our case, skin prick testing was positive to most bacitracin-containing products, and negative to products without bacitracin, supporting bacitracin as the causative allergen. Our findings demonstrate that skin prick testing to topical antibiotics could be performed safely in a patient with a history of a systemic reaction. Additionally, skin prick testing can provide valuable information to help identify a causative agent after reactions to combination topical antibiotics. This can prevent broad antibiotic allergy labels, which are associated with adverse patient outcomes.

References:

1. Gehrig, Kathryn A., and Erin M. Warshaw. "Allergic contact dermatitis to topical antibiotics: epidemiology, responsible allergens, and management." Journal of the American Academy of Dermatology 58.1 (2008): 1-21.
2. Schroer, Brian C., Charity C. Fox, and David W. Hauswirth. "Skin testing after anaphylaxis to a topical Neosporin preparation." Annals of Allergy, Asthma & Immunology 101.4 (2008): 444.

# Inhaled Nitric Oxide in Interstitial Lung Disease: A Systematic Review and Meta-Analysis of Randomized Controlled Trials

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Background: Interstitial lung disease (ILD) can lead to pulmonary hypertension (PH) through hypoxic vasoconstriction and pulmonary vascular remodeling. In such patients, inhaled nitric oxide (iNO) may lower pulmonary vascular resistance and intrapulmonary shunting, potentially improving functional capacity in patients with ILD. However, evidence supporting this therapy remains limited to a few randomized controlled trials. Therefore, we conducted a meta-analysis comparing iNO therapy with placebo to evaluate its efficacy and safety in patients with ILD.

Methods: We systematically searched PubMed, Embase, and Cochrane databases on November 22, 2025, for randomized controlled trials (RCTs) comparing iNO versus placebo in patients with ILD. Inclusion criteria were: (1) randomized trials; (2) comparing iNO to placebo; (3) enrolling patients with ILD. We excluded studies with patient populations that overlapped with those of other included studies. We computed mean differences (MD) with a 95% confidence interval (CI) for continuous endpoints. The primary endpoints were 6-minute-walk distance (6MWD) and any adverse events.

Results: This meta-analysis included three RCTs, including one crossover trial, with 233 patients. Of whom, 149 received iNO and 128 received placebo. A total of 113 (48.4%) patients had PH. Median follow-up period was 16 weeks. iNO was administered at 45 or 75 μg/kg IBW/h. There was no significant difference in 6MWD (MD -0.11m; 95% CI -3.37 to 3.15; p= 0.95) and adverse events (RR 1.16; 95% CI 0.99 to 1.35; p= 0.0670) between iNO and placebo group.

Conclusion: In this meta-analysis, iNO did not demonstrate benefit in 6MWD and any adverse events compared with placebo in patients with ILD. Despite the proposed benefits of iNO, including preferential vasodilation and improved ventilation–perfusion matching, our study does not provide sufficient evidence to support its use in this population. Inclusion of patients without PH may have contributed to the lack of benefit seen. Additionally, given the limited number of previous trials, further RCTs are warranted to more rigorously evaluate the efficacy and safety of iNO.

# Complex Klebsiella pneumoniae Liver Abscess Successfully Treated With Laparoscopic Drainage After Percutaneous Drainage Failure

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Introduction: Klebsiella pneumoniae liver abscess is most prevalent in Asia and has been increasingly reported in the United States. It is characterized by an aggressive clinical course with a high risk of metastatic complications. Early initiation of appropriate antibiotics and timely drainage are crucial for successful management. However, large, multiloculated, complex liver abscesses carry a risk of percutaneous drainage failure.

Case description: A 70-year-old male with a past medical history of prediabetes, chronic kidney disease, and hyperlipidemia presented with a two-week history of progressively worsening right upper quadrant abdominal pain. The pain was rated 8 out of 10, sharp, localized, constant, and exacerbated by coughing. On arrival, he was afebrile at 37.0°C but tachycardic at 107 beats per minute. Physical examination of the abdomen revealed severe right upper quadrant tenderness and hepatic percussion tenderness. Laboratory testing showed neutrophil-predominant leukocytosis, elevated alkaline phosphatase, and elevated gamma-glutamyl transferase. CT abdomen with contrast revealed an 11-cm multiloculated mass in the right hepatic lobe, suspicious for a liver abscess. Ceftriaxone and metronidazole were initiated. Percutaneous drainage placement was performed, and the aspirated fluid culture grew Klebsiella pneumoniae. Follow-up imaging demonstrated a persistent hepatic abscess, a new right-sided pleural effusion, and a perihepatic fluid collection along the hepatic dome. On hospital day 5, he underwent laparoscopic partial liver resection with fenestration of the abscess cavity. Postoperative imaging showed marked improvement, and his symptoms and leukocytosis improved thereafter.

Discussion: In the management of large multiloculated Klebsiella pneumoniae liver abscesses, timely laparoscopic drainage should be considered to achieve definitive source control given the high failure rate of percutaneous drainage. In addition to early initiation of appropriate antibiotics and careful clinical and radiologic monitoring, close communication with surgical teams are therefore essential. Recognizing this evolving epidemiology is crucial for optimal management.

# Beyond the Murmur: Rheumatic Heart Disease Challenges in the Marshall Islands

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Rheumatic heart disease (RHD) continues to be a significant cause of heart disease in resource-limited countries. In younger patients (<20), they may present with isolated mitral regurgitation whereas older patients usually have mitral stenosis. Echocardiography remains as the primary means to evaluate for valve abnormalities. Valvotomy is the primary treatment plan after medical optimization for patients with mitral stenosis with complications of pulmonary edema, orthopnea and heart failure symptoms secondary to rheumatic valvulopathy.

A 34-year-old male from the Marshall Islands presented to a Hawaii emergency department with progressive orthopnea, exertional dyspnea, lower extremity edema, and chest pain. Four weeks prior, he experienced a upper respiratory infection complicated by heart failure symptoms. Evaluation in Hawaii ED revealed elevated proBNP and 1st degree AV block. Transthoracic echocardiogram demonstrated severe aortic regurgitation, moderate mitral regurgitation, and severe left atrial dilation. Acute rheumatic heart disease was suspected based on inflammatory markers and antistreptolysin O titers. Penicillin and prednisone was started. Transesophageal echocardiogram showed aortic leaflet malcoaptation and thickened mitral valve leaflets. He was discharged with outpatient monitoring and delayed surgical valve repair.

RHD is a significant cause of morbidity and mortality in Marshall Islands and other Pacific Island nations. Antibiotic therapy is the mainstay therapy for acute rheumatic fever; however, access to antibiotics remains a challenge. Patients are referred to Hawaii or the mainland US for valve replacement. Native Hawaiian and Pacific Islanders (NHPI) account for a large portion of the total number of RHD cases in the US, and represent a severely understudied and underserved population. In Hawaii, NHPIs constitute the majority of mitral valve surgeries performed for RHD, despite representing a minority population on the island. For sustainable RHD control, focus should be to screen for RHD and enhanced research into studying these populations that have historically been neglected from the medical literature.

# Not Everything That Looks Malignant Is Cancer: A Case of Peritoneal Tuberculosis

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Introduction: Peritoneal tuberculosis (TB) is an uncommon manifestation of extrapulmonary tuberculosis that presents with nonspecific symptoms and radiographic findings that are often indistinguishable from malignancy, leading to both diagnostic and management delays. Its rarity underscores the importance of maintaining high clinical suspicion in patients with epidemiologic risk factors and ascites of unclear etiology.

Case Presentation: A 33-year-old Filipino man with latent TB and active tobacco use presented with one month of worsening generalized abdominal pain, decreased appetite, weight loss, and new periumbilical bruising. Physical examination revealed a thin, afebrile man with abdominal distension, shifting dullness, and periumbilical ecchymosis. Laboratory studies were significant for microcytic anemia and thrombocytosis. CT and MRI abdomen/pelvis showed peritonitis, ascites, and findings concerning for peritoneal carcinomatosis. Paracentesis revealed low serum-ascites albumin gradient (SAAG), lymphocyte-predominant fluid with elevated protein and adenosine deaminase. Peritoneal fluid cultures and acid-fast bacilli (AFB) smears were negative. Diagnostic peritoneal biopsy demonstrated necrotizing granulomas and acid-fast bacilli with positive Mycobacterium tuberculosis PCR, confirming the diagnosis of peritoneal TB. Notably, chest X-ray was negative for pulmonary involvement. Standard RIPE (rifampin, isoniazid, pyrazinamide, and ethambutol) therapy was initiated but temporarily held on day three due to significant transaminitis. The patient was discharged with close outpatient follow up and plans for reinitiation of antituberculous therapy once liver enzymes normalized.

Discussion: This case highlights the diagnostic challenge of peritoneal TB, which is frequently misdiagnosed because its clinical and radiographic features closely mimic malignancy. Image findings of diffuse peritoneal thickening, omental thickening, and ascites may be indistinguishable from peritoneal carcinomatosis, often prompting an initial work up for metastatic cancer [1]. In this patient, peritoneal fluid studies were initially non-diagnostic and imaging suggested possible metastatic malignancy, necessitating tissue sampling for definitive diagnosis. In a patient from a tuberculosis-endemic region, it is important to ask directly about prior TB exposure, treatment history, and risk factors for reactivation. Incorporating a patient's socio-epidemiological history can better inform risk assessment and diagnostic approach. Additionally, management requires prompt initiation of standard RIPE therapy although drug-induced hepatotoxicity can complicate treatment [2]. Close monitoring of liver enzymes is crucial and a stepwise reintroduction of RIPE therapy or consideration of alternative regimens is recommended when hepatotoxicity occurs [2].

References:
1. Ha HK, Jung JI, Lee MS, Choi BG, Lee MG, Kim YH, Kim PN, Auh YH. CT differentiation of tuberculous peritonitis and peritoneal carcinomatosis. AJR Am J Roentgenol. 1996 Sep;167(3):743-8. doi: 10.2214/ajr.167.3.8751693. PMID: 8751693.
2. Wu DC, Averbukh LD, Wu GY. Diagnostic and Therapeutic Strategies for Peritoneal Tuberculosis: A Review. J Clin Transl Hepatol. 2019 Jun 28;7(2):140-148. doi: 10.14218/JCTH.2018.00062. Epub 2019 May 13. PMID: 31293914; PMCID: PMC6609850.

# Rapid Pericardial Effusion Formation in Purulent MSSA Pericarditis: A Case Report

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Introduction: Purulent pericarditis is a rare but life-threatening infection that accounts for less than 1% of pericarditis cases. Even with optimal treatment, mortality remains between 20% and 40%. It commonly arises through hematogenous spread, contiguous infection, or postoperative inoculation, typically affecting immunocompromised patients. Because classic findings such as chest pain and friction rub are frequently absent, patients may instead present with rapidly progressive cardiac tamponade. This case describes an exceptionally rapid accumulation of purulent pericardial fluid documented on serial echocardiography originating from a peripheral soft tissue infection.

Case Presentation: A 56-year-old male with uncontrolled type 2 diabetes mellitus (HbA1c > 15.5%), hypertension, and hyperlipidemia presented with 5 days of generalized weakness and poor oral intake after stubbing his left toe six weeks earlier. The injury had progressed to a soft tissue infection, but was never medically evaluated. On admission, he was found to be in diabetic ketoacidosis with glucose > 1000 mg/dL, anion gap of 40, and bicarbonate of 10 mmol/L. His WBC count was 37.1 $\times 10^9$/L. Troponin was elevated at 16,603, and electrocardiogram revealed diffuse ST elevations.

Initial transthoracic echocardiogram (TTE) showed a left ventricular ejection fraction of 35% with no evidence of effusion. Broad-spectrum antibiotics and insulin were started for suspected sepsis and metabolic stabilization. By hospital day 3, he developed refractory shock requiring four vasopressors, accompanied by new-onset atrial fibrillation with rapid ventricular response. Repeat TTE revealed a new large pericardial effusion. Emergent pericardiocentesis with drain placement performed at ICU bedside drained over 500 mL of thick, white, purulent fluid. Gram stain of the pericardial fluid demonstrated 4+ gram-positive cocci in clusters, and direct molecular method revealed methicillin-susceptible Staphylococcus aureus (MSSA). He was transitioned to targeted intravenous antistaphylococcal therapy and received ongoing critical care support. Over the following days, his hemodynamic status improved, metabolic derangements resolved, and patient survived to hospital discharge.

Discussion: This case demonstrates purulent pericarditis secondary to hematogenous spread of MSSA from a peripheral soft tissue infection in a patient with uncontrolled diabetes. Beyond its rarity, this case is notable for radiographically documented rapid effusion formation within a 48-hour interval, captured on serial TTEs. To our knowledge, no prior reports have demonstrated such rapid fluid accumulation in purulent pericarditis. The patient's abrupt decompensation underscores how quickly tamponade can develop even after an initially normal study. Because classic signs are often absent, clinicians must maintain a high index of suspicion for purulent pericarditis in septic or immunocompromised patients with unexplained hemodynamic collapse. Repeat echocardiography is essential whenever there is a new concern for cardiogenic or obstructive shock, regardless of earlier normal imaging. Early pericardial drainage and targeted antibiotic therapy remain lifesaving, with surgical intervention sometimes required to prevent constrictive sequelae.

Conclusion: Purulent pericarditis is rare but rapidly fatal if unrecognized. This case uniquely demonstrates radiographic evidence of pericardial fluid accumulation over just two days, reinforcing the importance of serial imaging in unstable patients. Timely reassessment, prompt drainage, and organism-specific therapy are critical to survival.

# Moyamoya Disease: A Diagnostic Challenge

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Introduction: Moyamoya Disease is a chronic, rare idiopathic cerebrovascular disease characterized by progressive stenosis of the terminal portions of the internal carotid arteries and small vessel collateral formation. Patients characteristically present with strokes (ischemic or hemorrhagic) or headache and while pathogenesis is poorly understood, is thought to have a strong genetic component linked with the RNF213 gene mutation. In the United States, incidence is estimated at 0.1 per 100,000 individuals in the United States. Here we present a challenging case of suspected Moyamoya Disease with atypical imaging findings.

Case: We saw a 38-year-old female with a history of diabetes mellitus type 2, hypertension, hyperlipidemia, and two prior strokes with residual right sided weakness, who presented to the emergency department following a mechanical fall and two weeks of progressive right-sided weakness and dysphagia. Initial evaluation was significant for right sided hemiplegia and word finding difficulty with an otherwise intact neurologic exam.

She was admitted for stroke workup with CT as well as MR angiography of the head and neck revealing a recent lacunar infarction, as well as chronic appearing occlusion of the bilateral ACAs, bilateral MCAs, and left PCA, plus occlusion of the intracranial segments of the bilateral internal carotid arteries, and extensive proliferation of the intracranial pial vessels with moyamoya appearance of the lenticulostriate territories. US carotid duplex noted bilateral absence of arterial flow in the internal carotid arteries, with patent common, external, and vertebral arteries. Neurology was consulted and an extensive autoimmune and infectious workup was pursued yet unrevealing. Genetic testing for CADASIL via NOTCH3 mutations proved negative with the only notable workup being a hemoglobin A1c at 14% and mild hypertriglyceridemia. She was managed with a statin and dual antiplatelet therapy with gradual improvement of her neurologic deficits over the following few days. She was ultimately discharged with close follow-up from neurology and neurosurgery for evaluation for cerebral artery bypass grafting.

Discussion: Current consensus statements from the RCMD on the diagnosis of Moyamoya disease require characteristic imaging findings in the absence of autoimmune diseases, meningitis, brain tumors, Down Syndrome, Neurofibromatosis type 1, head irradiation, or sickle cell disease. Treatment primarily involves medical management aimed at minimizing risk of further cerebrovascular disease. For those with advanced disease, surgical revascularization remains an option with reported benefits in decreasing additional strokes/TIAs, improving prognosis and neurocognitive function. While available, genetic testing often doesn't impact treatment strategies and was deferred in our case.

Our case highlights the complexity of both diagnosing and adequately treating cases of suspected Moyamoya disease as our patient displayed typical findings of ICA occlusion and collateral formation, however her disease extended beyond the typical territory with additional small vessel disease. In such cases, it remains crucial to consider hereditary dyslipidemias as well as vasculitides in the differential. As workup for these proved negative, we posit the possibility of Moyamoya disease alongside small vessel atherosclerosis secondary to uncontrolled hypertension and diabetes.

Conclusion: Moyamoya Disease is a rare progressive cerebrovascular disease with significant diagnostic challenges in cases of atypical imaging findings.

# Best Practice Alert Intervention in PECARN Algorithm Usage in Pediatric Head Injury Management in Hawai'i

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Pediatric head trauma is a common emergency department (ED) presentation, with appropriate management critical to balancing early detection of acute neurologic pathologies and the risks of iatrogenic harm from unnecessary radiation, particularly with computed tomography (CT). The Pediatric Emergency Care Applied Research Network (PECARN) algorithm provides an evidence-based framework for utilizing head CT scans in children presenting with minor head trauma. Despite widespread validation and high sensitivity and specificity, utilization of the PECARN guidelines remains inconsistent. This study aimed to assess the impact of a Best Practice Alert (BPA) within Hawaii Pacific Health's (HPH) electronic medical record system, on PECARN utilization in pediatric head trauma cases in EDs across Hawai'i.

This retrospective review involved 761 pediatric patients who presented to an HPH-affiliated ED with a head injury primary diagnosis and received CT scans. The pre-intervention cohort (n=311) included patients for January 2020 to December 2021, and the post-intervention (n=355) chart review included patients from January 2023 to May 2024, following the BPA implementation. The BPA prompted providers to consider PECARN criteria before ordering a head CT and require a reason for bypassing the alert. Patient demographic characteristics including individual PECARN components, provider documentation of medical decision making/PECARN criteria, CT imaging results (presence of skull fracture, traumatic brain injury), and need for neurosurgical intervention were collected. Chi-squared tests were performed to detect statistically significant differences between pre- and post-intervention groups.

Analysis comparing the pre- and post-intervention group showed a significant increase in provider notes that explicitly mentioned PECARN criteria and medical decision making. However, there was no significant change in the percentage of appropriate CT scans ordered, CT imaging results, or need for neurosurgical intervention.

These findings demonstrate that although the BPA significantly increased provider documentation of the PECARN algorithm, it did not alter CT utilization. This suggests that improving awareness and documentation alone may not be sufficient to alter provider behavior. Possible future directions include evaluating the alert usability, understanding which factors influence overrides, and enhancing patient or parent communication. Furthermore, assessing only the proportion of appropriately ordered CT scans may underestimate the impact of the BPA and future evaluation could investigate any patients with a head injury primary diagnosis in which CT scans were appropriately avoided.

# Comparative Effectiveness of GLP-1 Receptor Agonists Versus Metformin in Reducing Dementia Risk Among Adults ≥65 Years with Type 2 Diabetes Mellitus and Delirium: A 20-Year Real-World Data Analysis (2005–2025)

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Introduction: Delirium in older adults is strongly associated with and can predate dementia. While GLP-1 receptor agonists (GLP-1 RAs) may provide neuroprotective benefits, their role in reducing dementia risk among older patients with type 2 diabetes mellitus (T2DM) and prior delirium is unclear. This study compares the effectiveness of GLP-1 RAs and metformin in preventing dementia among patients with a history of delirium using a large healthcare database.

Methods: A retrospective cohort study was conducted from 2005 to 2025 using data from the TriNetX Global Federated Research Network, which includes information from U.S. and international healthcare organizations. We identified adults aged 65 and older with Type 2 Diabetes Mellitus (T2DM) and delirium, who received either GLP-1 receptor agonists (exposure) or metformin (control). Propensity score matching was used to balance the treatment groups based on age, sex, ethnicity, medications, diagnostic tests, and comorbidities, with the primary outcome being the development of dementia. We analyzed time-to-event outcomes using Kaplan–Meier survival curves and Cox proportional hazards models and estimated odds ratios (ORs). Subgroup analyses were conducted by age (65–75 years and Above 75 years), sex, race, and ethnicity, and sensitivity analyses included additional covariates.

Results/Discussion: In a study involving 29,520 patients treated with GLP-1 receptor agonists (GLP-1RAs) and 29,520 matched patients treated with metformin, the mean age was 74 years, with 52% being female. The use of GLP-1RA therapy was associated with a significantly lower risk of dementia compared to metformin among adults aged 65 years and older with T2DM and delirium (adjusted hazard ratio [AHR] 0.754, 95% confidence interval [CI] 0.715-0.794, p-value < 0.001; odds ratio [OR] 0.586 95% CI 0.555–0.620, p-value < 0.001). The reduction in dementia risk was more pronounced in patients aged 65–75 years (AHR 0.679, 95% CI 0.631–0.730; OR 0.509, 95% CI 0.472–0.550) compared to those aged 75 years and older (AHR 0.836, 95% CI 0.769–0.908; OR 0.703, 95% CI 0.642–0.770), indicating that initiating treatment earlier in the trajectory of neurodegeneration may provide enhanced benefits. We found that GLP-1RAs compared to metformin are associated with a reduced risk of dementia, particularly in Alzheimer's disease and vascular dementia. The inconsistent outcomes in frontotemporal and Lewy body dementia may stem from differences in underlying causes and small sample sizes.

Conclusion: In older adults with T2DM and delirium, GLP-1 RA therapy was associated with a reduced risk of dementia compared with metformin, with the strongest and most consistent effects observed for Alzheimer's and vascular dementia. Earlier initiation (age 65–75 years) may confer greater neuroprotective benefit. Prospective randomized controlled trials are needed to confirm these findings and clarify differential effects across dementia subtypes.

# When Transverse Myelitis Reveals A Bigger Picture: A Case of Neuromyelitis Optica Spectrum Disorder

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Introduction: Neuromyelitis optica spectrum disorder (NMOSD) is a rare, relapsing autoimmune disease of the central nervous system (CNS) characterized by episodic demyelination primarily affecting the optic nerves and spinal cord. Most cases are mediated by autoantibodies against aquaporin-4 (AQP4), a transmembrane water channel expressed on astrocytes. Median age of onset is approximately 40 years, although 20% of cases present in childhood or after the age of 65. Presenting symptoms most commonly include visual loss and paralysis. AQP4-immunoglobulin G (IgG) seropositivity distinguishes NMOSD from other demyelinating diseases. Early recognition is critical, as relapses frequently result in significant and often irreversible neurological disability.

Case Presentation: A 66-year-old woman with osteopenia and hyperlipidemia presented with progressive bilateral lower extremity weakness, paresthesias, and urinary incontinence over three days. On examination, strength was 3-4/5 in the lower extremities and 5/5 in the upper extremities, with 2+ deep tendon reflexes bilaterally. Initial laboratory evaluation revealed normal WBC count (4.35 x 103/uL), elevated erythrocyte sedimentation rate (82 mm/hr), hyponatremia (131 mEq/L), hypokalemia (3.1 mEq/L), and hypochloremia (93 mEq/L). CT imaging of the head, cervical, thoracic, lumbar spine and chest/abdomen/pelvis was unremarkable. MRI of the cervical and thoracic spine demonstrated T2 hyperintensities in the medulla, upper cervical spine, and central spinal cord extending from C5 to the conus, suggestive of a longitudinally extensive transverse myelitis (LETM). Comprehensive neurologic and rheumatologic workup, including lumbar puncture, revealed reactive NMO/AQP4 fluorescence-activated cell sorting (FACS) test with markedly elevated titers (>1:100000), elevated anti-nuclear antibody titer (160, speckled pattern), elevated serum anti-SSA/Ro (>8.0) and serum anti-SSB/La (>8.0). Myelin oligodendrocyte glycoprotein (MOG) and other infectious and autoimmune/paraneoplastic testing were negative. The patient initially improved with steroids and IVIG. Due to clinical worsening, she was transitioned to therapeutic plasma exchange (PLEX) with a prolonged steroid taper. Her strength gradually improved. She was discharged on hospital day 19 to a skilled nursing facility, with referral for outpatient initiation of inebilizumab-cdon.

Discussion: The diagnosis of NMOSD requires presence of one or more of six core clinical syndromes, supportive imaging, and AQP4-IgG seropositivity. Our patient presented with acute myelitis, LETM, and high AQP4 titers. MOG Antibody-Associated Disease (MOGAD) was ruled out. The degree of AQP4 titer elevation is associated with increased disease severity. One-third of patients have coexisting autoimmune disorders such as SLE or Sjögren's syndrome. Acute flares are treated with glucocorticoids or PLEX for severe cases. IVIG was initially administered due to diagnostic uncertainty but evidence for rescue usage is limited. Long-term relapse prevention includes multimodal immunosuppressive agents or monoclonal antibodies, such as eculizumab, inebilizumab, and satralizumab. This case highlights the importance of considering NMOSD in patients with transverse myelitis and LETM, even without optic neuritis, given its highly variable presentation and debilitating outcomes. It also emphasizes the need for early initiation of immunosuppressive and timely PLEX therapy before confirmatory NMO/AQP4 results are available.

# Long-acting Paliperidone Injection Causing Neuroleptic Malignant Syndrome

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Introduction: Neuroleptic malignant syndrome (NMS) is a rare complication of antipsychotic medications. It has been described in long-acting antipsychotic injection medications (LAI). It is characterized by muscle rigidity, fever, and dysautonomia. The rigidity can lead to rhabdomyolysis with creatine kinase (CK) elevation. Supportive management is first line treatment. Dantrolene may be used when symptoms persist or worsen.

Case Presentation: A 32-year-old female with a past medical history of schizophrenia and anxiety was admitted to the hospital for suicide attempt. Three days earlier, she had received her paliperidone 234mg monthly intramuscular injection. Her prior dose was paliperidone 819mg three-month injection, given 2.5 months prior. She had been in her usual state of health when she suddenly became agitated and tried to jump off a balcony. She was restrained and brought to hospital by emergency medical services.

In the emergency department she was severely agitated, requiring restraints. Vital signs were significantly abnormal with heart rate 180s, respiratory rate 60-70s, temperature 101.4 F, oxygen saturation 89%, blood pressure 140s/90s. Following midazolam injection, she rapidly returned back to baseline mental status and vitals normalized. She was placed back on her home meds including lorazepam and propranolol. CK was noted to be 280 IU/ml initially and on next check to 4996 IU/ml with further subsequent rise, and the patient was started on high volume continuous IV fluids. The patient was noted to have rigidity in bilateral upper extremities on exam, without other findings. Given the isolated rigidity and further rise in CK level, she was started on low dose dantrolene on the second hospital day with subsequent titration. Her rigidity gradually improved with a downtrend of CK levels over the ensuing days. AST and ALT were also noted to be elevated during hospitalization with similar trend to improvement. Dantrolene was tapered off on the day of discharge, and laboratory values normalized in the week following. Her renal function remained stable with urinalysis negative for findings of myoglobinuria during hospitalization. Her long-acting antipsychotic was continued at the same monthly dose with close prospective monitoring.

Discussion: This case demonstrates neuroleptic malignant syndrome precipitated by paliperidone long-acting intramuscular injection. The overlap of paliperidone three-month injection and the subsequent one-month injection by two weeks likely contributed to the triggering of this syndrome. The time of onset from administration in this case is similar to other case reports on LAI-induced NMS, however our case is unique in the duration of rigidity. Our patient had rapid improvement in fever/agitation with IV benzodiazepine, but had continued muscular rigidity leading to severe elevation of CK, likely due to long half-life of LAI. This case highlights the management of NMS with low dose oral dantrolene, without lasting renal or hepatic injury, demonstrating feasibility of this medication to lead to resolution of symptoms without escalating to higher dose or IV administration.

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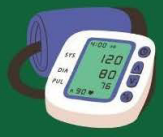

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- Relocation Allowance
- Pension plus Profit-Sharing Plans
- Flexible Spending Plans
- Vacation and Paid Holidays
- Comprehensive Medical and Dental Insurance
- Educational Leave and Allowance
- Sick Leave and Disability Income Benefits
- Professional Liability Insurance
- Identity Theft Protection

## INTERNAL MEDICINE SUBSPECIALTY STAFF & LOCUM OPPORTUNITIES

- Cardiology (Maui & Oahu)
- Dermatology (Maui)
- Gastroenterology (Maui & Oahu)
- Nephrology (Maui & Oahu)
- Oncology (Oahu)

## SCAN FOR MORE INFORMATION

# HOPE

Housing Opportunities are Possible for Everyone

## Helping Locals STAY HERE

## HOPE HOMEBUYER EDUCATION PROGRAM

### PREPARE TO BUY A HOME:

Homebuyers referred by a **REALTOR®*** will have access to:

- homebuyer education classes
- unlimited homeownership coaching
- buyer assistance referrals
- post-purchase services

**More than 70% of HOPE participants bought a home/ entered escrow within 6-18 months of program completion.**

### ENROLL FOR JUST $10!

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Photo courtesy of the Hawai'i HomeOwnership Center

**www.hicentral.com/ hopehomebuyer**

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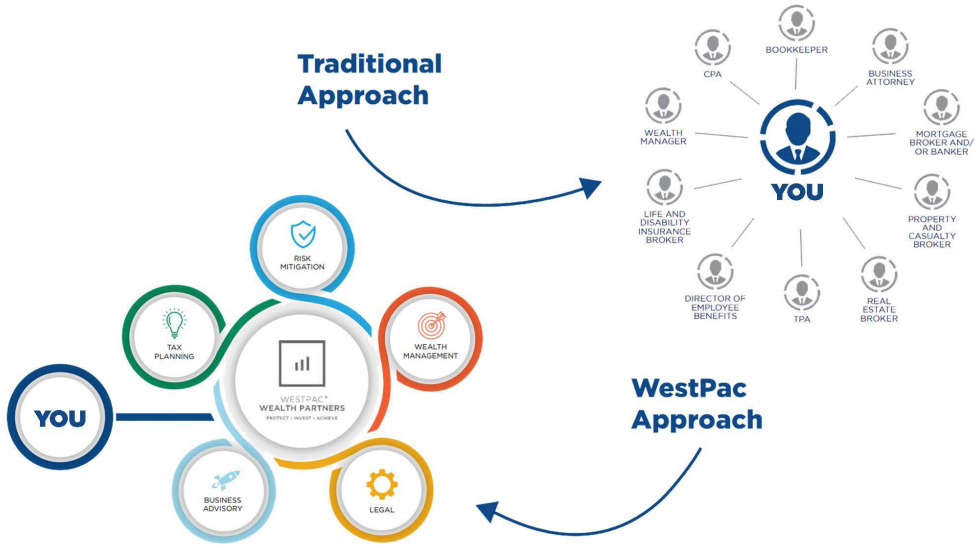
# WestPac Wealth Partners
## FOR MEDICAL PROFESSIONALS

### We specialize in the science of a healthy financial lifestyle.

As a physician, your time and money are valuable. That is why one of our top priorities is to address the unnecessary risk that is present in the vast majority of physicians' financial plans. Many physicians that we meet have some relationship with a financial planner, advisor, insurance agent, accountant, attorney, etc. When we take a holistic view of their planning, however, most are financially imbalanced. They are often exposed to unnecessary risks from embedded taxes, lawsuits, lifestyle factors, inefficient use of assets, etc. Failing to address all of these forces places downward pressure on their ability to build wealth. At WestPac Wealth Partners, we bring together leading professionals in the fields of financial planning, taxation, law, practice management, succession planning, and client retention. This way, we can best assist our clients in addressing these issues and helping them to achieve optimal Financial Balance® in their lives.

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