2025 Hawai'i Chapter

Scientific Meeting

Honolulu Country Club

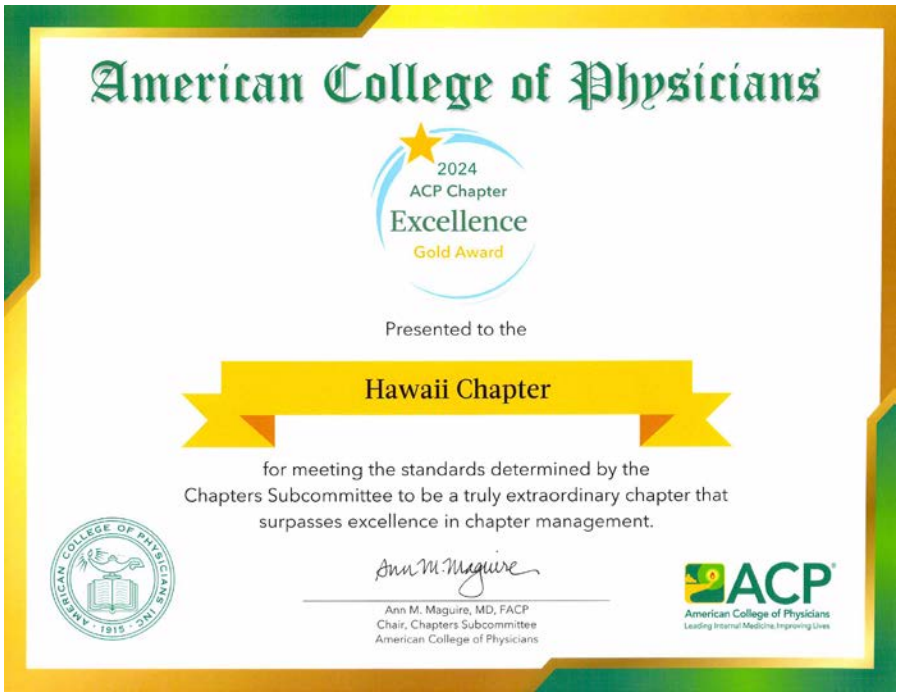
Saturday, March 8, 2025

In-person/Virtual

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

Sam, thank you for all your hard work and dedication to the Chapter during your governorship.

We will miss you but know that you will still be around to lend a helping hand.



We are pleased to announce that our chapter is in receipt of the Gold Level of the 2024 Chapter Excellence Award! The award recognizes truly extraordinary chapters that surpass excellence in chapter management. We are in the company of 54 other outstanding chapters. In order to achieve the Gold Level of the Chapter Excellence Award, chapters must meet nineteen Bronze criteria, seventeen Silver criteria and multiple 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.

We 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.

2025 ACP Hawai‘i Chapter Laureate Award

Dr. Samuel Joiner Evans is a distinguished pulmonologist and educator, deeply committed to patient care, medical education, and leadership. With over two decades of experience, he serves as Chief of Pulmonary Medicine at Straub Hospital and Clinic and as an Assistant Clinical Professor at the University of Hawaii's John A. Burns School of Medicine.

Dr. Evans' career is marked by extensive leadership roles, including serving as Governor of the American College of Physicians (ACP), Hawaii Chapter, from 2021-2025, and Medical Director for both the Hawaii Society of Respiratory Care and Straub Respiratory Care Services. As an elected ACP Governor, he has worked closely with a local council to oversee chapter activities, appointed members to committees, presided at regional meetings, and represented Hawaii Chapter on the national ACP Board of Governors.

Beyond his clinical practice, Dr. Evans has played an important role in shaping the future of medicine locally here in Hawaii. He has served as the Program Director for the University of Hawaii's Transitional Residency Program and is a highly regarded mentor to countless medical students, residents, and fellows.

Board-certified in Internal Medicine, Pulmonary Medicine, and Critical Care, Dr. Evans has been a Fellow of the American College of Physicians (FACP) since July 1997. This honorary national designation recognizes his ongoing service and contributions to the field of medicine.
His research and scholarly interests span a wide range of topics, including nociception, neural mechanisms of cough, tobacco smoke and neuroplasticity, interventional pulmonology, geriatric critical care, and gender differences in critical care. He has published widely on these topics in numerous reputable scientific journals.

A well-respected leader in pulmonary and critical care medicine, Dr. Evans has received numerous accolades, including recognition as one of "Hawaii's Best Physicians" and multiple awards for excellence in education and clinical care. Among these honors are Straub Hospital's prestigious Strode Awards for Excellence in Medical Education, Clinical Care, and Patient Satisfaction. His contributions to the field have also earned him invitations to serve on national medical committees and speak at both national and international venues.

The ACP Laureate Award is the most prestigious honor bestowed upon a member at the local level. The Laureate Award is designed to honor those ACP Fellows and MACPs who have demonstrated, by their example and conduct, an abiding commitment to excellence in medical care, education, and research, and service to their community, their chapter, and the ACP.

This year, the Hawaii Chapter recognizes Dr. Evans dedication to ACP by bestowing upon him the 2024 Laureate Award. Congratulations, Dr. Evans!

2025 ACP Meeting Schedule
Saturday, March 8, 2025

7:30-7:55 am (25 minutes)
Registration and Continental Breakfast

7:55-8:00 am (5 Minutes)
- ❖ Governor's Welcome – Samuel J. Evans, MD, FACP
- ❖ Program Chair – Kuo-Chiang Lian, MD, FACP

8:00 -8:45 am (45 minutes)
Session#1 Colorectal Cancer Screening
Scott K. Kuwada, MD, AGAF, FACP

8:45-9:30 am (45 minutes)
Session#2 Waves of Concern: Navigating the Tides of Chronic Kidney Disease in Hawaii
Christie Izutsu, MD, FACP

9:20-9:45 am (15 minutes)
Break/Visit Exhibits/Networking

9:45-10:45 am (60 minutes)

*Poster A1	*Podium 2	*Poster A2
9 Posters	4 Podiums	9 Posters
(DH Ballroom)	(Main Ballroom)	(Ewa Ballroom)

10:45-11:00 am (15 minutes)
Break/Visit Exhibits/Networking

11:00-11:45 – (45 minutes)
Session #3 – Climate Change in Health (Panel)
Marcus Iwane, MD/Elizabeth Keifer, MD

11:45-12:30 pm – (45 Minutes)
Lunch/Business Mtg/Break/Visit Exhibits/Networking/Wellness Massage

12:30-1:30 pm – (60 minutes)
Session #3 - Schatz Lectureship – Beyond the Data: Understanding and Advancing Health Equity for NHPE Populations
Tui Lauilefue, MD/Kahea Rivera, MD

1:30-2:00 pm – (30 minutes)
Break/Visit Exhibits/Networking/Wellness Massage

2:00-3:00 pm – (60 minutes)

*Poster P1	*Podium 1	*Poster P2
10 Posters	4 Podium	9 Posters
(DH Ballroom)	(Main Ballroom)	(Ewa Ballroom)

3:00-3:30 pm – (30 minutes)
Break/Visit Exhibits/Networking/Wellness Massage

3:30-4:15 pm – (45 minutes)
Session#4 – 23rd Edition – Updates in Outpatient Medicine
Robert Gluckman, MD, MACP

4:15-4:30 pm – (15 minutes)
Break/Visit Exhibits/Networking/Wellness Massage

4:30-4:45 pm – (15 minutes)
Abstract Winners/Awards Presentation

5:00-6:15 pm – (75 minutes)
Session#5 – Doctor's Dilemma
Chief Medical Resident's:

Nicholaus Crump, MD – Kaiser Chief
Courtney Kolberg, MD & Rita Paulis, MD – Tripler Army Medical Center Chief
Kevin Benavente, DO, Landon Kozai, MD & Amanda Wasko, MD – UH Chief

Podium Presentation Schedule

Morning Podium Presentations
9:45 am – 10:45 pm (60 minutes)

9:45 am – 10:00 am
"Association Analysis of Congenital Heart Disease and Diabetes Mellitus in the Diverse NIH All of Us Cohort" - Aileen Ferrer

10:00 am – 10:15 am
"Male Condom Catheters vs. Indwelling Catheters: A Meta-Analysis on CAUTI Prevention" - Melania Kop

10:15 am – 10:30 am
"Advance Care Planning (ACP) Promoting Patient Goal-Concordant Care in an Academic Geriatrics Practice" – Stephanie Lu

10:30-10:45 am
"Identifying Racial Differences in Clinical Presentation of Obstructive Sleep Apnea in Native Hawaiian and Pacific Islander Patients" - Tamlyn Sasaki

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Afternoon Podium Presentations
2:00 pm – 3:00 pm (60 Minutes)

2:00 pm – 2:15 pm
"Ethnic Disparities and Risk Factors for Early-Onset Colorectal Cancer (EOCRC): Insights from a Large Multi-Institutional Network" – Toru Nakata

2:15 pm – 2:30 pm
"Racial and Ethnic Disparities in Metabolic Dysfunction-Associated Steatotic Liver Disease and Liver Fibrosis: Cross-Sectional Study Using Transient Elastography" - Yusuke Miyitani

2:30 pm – 2:45 pm
"Body Roundness Index (BRI) and All-Cause Mortality in Older Japanese-American Men: The Kuakini Honolulu Heart Program" – Aarthi Sridhar

2:45 pm – 3:00 pm
"Factors associated with treatment delay in patients with colorectal cancer" – Men Tanariyakul

Learning Objectives

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

- Gastroenterology and Colon Cancer
- Chronic Kidney Disease in Hawaii
- Internal Medicine Updates 2025
- Schatz Lecture - DEI
- Climate Change in Health Panel Discussion
- 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 2024 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

Samuel Evans, MD, FACP - Assistant Clinical Professor, Department of Medicine, University of Hawai'i and Hawai'i Pacific Health, Honolulu, HI
ACP Governor, Hawai'i Chapter
Email: samevansmd@gmail.com

Program Committee

Program Chair: Kuo-Chiang Lian, MD

Mary Ann Antonelli, MD, FACP
Kevin Benavente, DO
Lisa Camara, MD, FACP
Nickolaus Crump, MD
James Epure, MD, FACP
Samuel Evans, MD, FACP
Evan Ewers, MD
Alvin Furuike, MD, MACP
Robert Gluckman, MD, MACP
Jonathan Hu
Florence Kan, MD
Jennifer Katada, MD, FACP
Stephen Kemble, MD
Diana Kim, MD
Courtney Kolberg, MD
Landon Kozai, MD
Ryon Nakasone, MD, FACP
Janet Onopa, MD, FACP
Abby Pandula, MD
Rita Paulis, MD
David Spinks, MD
Luke Taylor
Arvin Tran, MD
Philip Verhoef, MD, FACP
Helen Victor, BBA
William Wadzinski, MD, FACP
Amanda Wasko, MD
James Yess, MD, FACP

Speaker Information

Robert Gluckman, MD, MACP – Dr. Robert Gluckman has served in a variety of leadership positions with Providence before relocating to Hawaii. Prior to becoming chief medical officer for Providence Health Plans in December 2010, Dr. Gluckman served as chief medical officer for the teaching clinics at Providence Medical Group. 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 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 a primary care internal medicine residency at Michael Reese Hospital in Chicago and is board certified in internal medicine.

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 is past chair of the ACP's Finance, Medical Practice and Quality and ACP Services Political Action Committees. He received the ACP Oregon Chapter's Laureate Award in 2013 for his contributions to the internal medicine community. He is currently the Chair of ACP's Member Insurance Trust. Today he will present his 23rd edition of an Update in Outpatient Medicine.

Marcus Iwane, MD- Dr. Marcus Kāwika Iwane was born and raised in Hawaii and earned his medical degree from the University of Hawaii, John A. Burns School of Medicine (JABSOM) in 2010. He continued his training at the University of Hawaii Internal Medicine Residency Program and is board certified in internal medicine. He belongs to the American College of Physicians, Hawaii Chapter and serves as president of ʻAhahui ʻo nā Kauka, the Association of Native Hawaiian Physicians.

In 2014, Dr. Iwane joined Hawaii Permanente Medical Group,where he practices internal medicine. He serves as physician in charge of Kaiser Permanente West Oahu, Waipio and Māpunapuna Medical Offices. Dr. Iwane also serves as clinical faculty for JABSOM, the Kaiser Permanente Bernard Tyson School of Medicine and the Kaiser Permanente Hawaii Internal Medicine Residency Program.

In 2018, Dr. Iwane was named to Pacific Business News' 40 Under 40 list of exceptional leaders. Most recently, he was recognized on the peer-nominated list Best Doctors in America®, Castle Connolly Top Doctors and received the 2021 Kaiser Permanente David Lawrence Community Service Award. In 2023, Dr. Iwane completed the Climate and Health Equity Fellowship through the Medical Society Consortium on Climate and Health.

Christie Izutsu, MD, FACP - Christie Izutsu is a community nephrologist at the Kidney Clinic of Hawaii and primary transplant nephrologist at the Queen's Medical Center. She completed her Internal Medicine residency and Nephrology fellowship at the University of California, San Diego before returning to Hawaii. She currently serves as the Nephrology Division Chief for the University of Hawaii Dept of Medicine.

Commented [HV1]:

Elizabeth Kiefer, MD - Elizabeth Kiefer is a physician and Assistant Clinical Professor at the University of Hawaii, John A. Burns School of Medicine. She completed a residency in internal medicine at The Mount Sinai Hospital in New York City and has practiced as a primary care and HIV physician. Dr. Kiefer also holds a master's degree in Epidemiology and Public Health from Columbia University. Her previous research focused on women's health, HIV, and hepatitis C virus, in the US and Africa. Dr. Kiefer's current interests are the intersection of public health and climate change, and she helps to lead a working group to inform, educate and improve health policy.

Scott K. Kuwada, MD, AGAF, FACP - Dr. Scott K. Kuwada, MD, AGAF, FACP, is a distinguished gastroenterologist and academic leader currently serving as the Ken and Gemie Arakawa Endowed Chair in Medicine, Professor and Chair of the University of Hawaii, as well as Chief of the Division of Gastroenterology. With extensive clinical and research expertise, he holds key positions at The Queen's Medical Center and the University of Hawaii Cancer Center. Dr. Kuwada's career spans over three decades, including faculty roles at the University of Utah and significant contributions to gastrointestinal oncology, cancer research, and medical education. His editorial and advisory work with national and international research organizations further underscore his commitment to advancing the field of gastroenterology.

Kahealani Rivera, MD – Dr. Kahealani Rivera is a kanaka maoli who was raised in the ahupua`a (land division) of Waipi`o, which is on the west side of O`ahu. She is a cardiovascular disease specialist that received her medical degree at Stanford Medical School and completed internal medicine residency and cardiology fellowship at John A Burns School of Medicine. She is the proud mother of a 6-year-old and a 22-year-old.

Tui Lauilefue, MD - Dr. Tui Lauilefue is the founder and owner of NiuOla Health and NiuOla Wellness Center, practicing internal medicine in Washington state and providing obesity medicine telehealth services across multiple states. Her approach to patient care is uniquely informed by her Samoan heritage. A graduate of the 2012 JABSOM class, she established her private practice with a focus on building meaningful patient relationships. Dr. Lauilefue, a TEDx speaker, combines clinical expertise with a compassionate approach to healthcare.

Doctor's Dilemma

Kevin Benavente, DO - Chief Medical Resident, UHIMRP, Honolulu, HI
Nickolaus Crump, MD - Chief Medical Resident, Kaiser Permanente, Honolulu, HI
Courtney Kolberg, MD - Chief Medical Resident, Tripler Army Medical Center, Honolulu, HI
Landon Kozai, MD - Chief Medical Resident, UHIMRP, Honolulu, HI
Rita Paulis, MD - Chief Medical Resident, Tripler Army Medical Center, Honolulu, HI
Amanda Wasko, MD - Chief Medical Resident, UHIMRP, Honolulu, HI

New Fellows

Dee-Ann L Carpenter, MD FACP
Yue Fang, MD FACP
Nestor C Herana Jr, MD FACP
Timothy D Kim, MD FACP
Diana Kim, MD FACP
Brent Jitsuo Matsuda, MD FACP
Traci Murakami, MD FACP
Hisami Oba, MD FACP
Jason Lee Pirga, MD FACP
Aldrich Ricalde, MD FACP
Ryota Sato, MD FACP
David J Spinks, MD FACP
Azfar S Syed, DO FACP

2025 Chapter Awards

Clinical Practice Award – John Houk, MD, FACP

Hospitalist Award – Christina Chong, MD, FACP
Cathy Ho, MD

Resident of the Year Award - Amanda Wasko, MD – QEC Ambulatory Chief
Kellen Bean, MD - Kaiser

To our New Members:

Faris J Abu Zanouneh
Samina Ahsan, MD
Michael S Ajimura
Kaela Akina-Magnussen
Sumi Akter, MBBS MD
Hiba Al Dulaimi, MBChB
Richelle Alfonso
Aia Alvarez Nishio
Gerardo Amador
Erich Auer
MJ Marie C Baptista
Alyssa Becker
Maythawee Bintvihok, MD
Alnor M Carnate Jr
Madeleine Chai
Karen Chang
Gloria Chen
Keila Ching, MD
Kathryn Choo Loy
Raelynn Chu
Alex Chun
Gina T Cicero
Collin Clarke
Austin D Corpuz
Ian Crumm
Eugenie Louise Cuerdo
Ana F Danko
Kyle Deacon
Kevin M Doan
Vishal Dobaria
John Dunn
Jamie Emoto
Roberto Fernandez
Aileen Ferrer
Saige R Fong
Bryan Ganzon
Joshua J Garcia
Joseph T Go
Connor Goo
Gavin Ha
Nicole N Hada
Kirstin P Hancock
Xavier K Heidelberg
Mika Heinz
Shirley M Hirata, MD
Kai Hirayama
Diana Holden
Joyce Huang
Henry Huynh
AKIMASA IIJIMA
Cheridean Kaaialii
Blake Kadomoto
Bree K Kaneakua
Johnathan Y Kim
Michelle Kimura
Katherine A Koch
Michaela Kop
Narathorn Kulthamrongsri
Ruchi Kumari
Jason Kuniyoshi, MD
Jerrick Laimana
Ho Hyun Lee

Justin Lee
Joseph Lee
Thiratest Leesutipornchai
William J Lew
Lauryn Liao
Christian Llantero
Nicholas K Loi
Stephanie Lu, DO
Rosalynn Manophinives
Samuel A Marihart, MD
Brett Mathews
Lexie Matsunaga
Lana Matti, MBBchB
Lana Matti, MD
Christyn Mellor
Hannah Mettias
Taryn Miyake
Akihiro Miyashita
Frances Morana
Keely Myers
Shay Nakahira
Keith Nakamatsu
Michael Nemrow
Edward T Nguyen
Corey Nishimura
Julia Oehlers
Chirstyn S Okuno
Josh Ooka
Marissa Oshiro
Daniel Ota
Parth Patel
Diana Quach
Alyssa Reyes
Arleen A Ricalde-Garcia, MD
Raja Haris Rizwan
Katelyn Saiki
Tamlyn Sasaki
Haruki Sawada
Patrick Shaw
Maxwell Shen, MD
Katelyn S Stenger
Reese Suzuki
Rachel Haide Tacata
Justin Tak
Ko Takamatsu, MD
Ross Takemoto
Amily Tam
Joshua Taylor
Witina Techasatian
Sean Terada
Brendan Tran
Subrahmanyan Ramakrishnan
Selena L Vanapruks
Jake Wakahiro
Chase Warashina
Amanda Wasko
Eric Webster, MD
Stryder K Williams
Matthew R Winters
Sharon Wong
Jennifer Wong
Kristal Xie
Kevin Yang
Stephanie Yoshimura, MD
Heather M Zimmerman

Celebrating Five Years

Kevin K. Kato, MD
Sian Yik Lim, MD, FACP
Pia Lorenzo, MD
Traci Murakami, MD
Deep Patel, MD
Tara Reed, MD
Krystle Salazar, MD
Hannah Schmitz, MD
Warren I Tamamoto, MD FACP
Adrian Worthen, MD
Chihui Yuan, DO

Celebrating Ten Years

Sandy Nelson, MD
Philip Verhoef, MD, FACP
Andrew Van Wieren, MD, FACP

Celebrating Twenty Years

Mark T. Kuge, MD
James R. Lucas, MD, FACP
Justin T. Barratt, MD
Lavonda Mee-Lee Nakamoto, MD

Celebrating Fifteen Years

Christine S. Fukui, MD
Chelsea Ching-Endow, MD
Kuo-Chiang Lian, MD, FACP
Graham Cormack, MD, FACP

PODIUM PRESENTATIONS

Association Analysis of Congenital Heart Disease and Diabetes Mellitus in the Diverse NIH All of Us Cohort

Aileen Ferrer, MPH, MS2[1], Ba Thong Nguyen, PhD[2,4], Robert Hufnagel, MD, PhD[3], Youping Deng, PhD[4], Yiqiang Zhang, PhD[2,4]

[1]University of Hawaii, John A Burns School of Medicine, Honolulu, HI
[2]University of Hawaii, Department of Anatomy, Biochemistry and Physiology, Honolulu, HI
[3]Kaiser Permanente Hawaii Region, Center for Integrated Healthcare Research, Honolulu, HI
[4]University of Hawaii, Department of Quantitative Health Sciences, Honolulu, HI

Background: Congenital heart disease (CHD) affects 1% of infants worldwide, with 97% now surviving into adulthood due to medical advancements. As the adult CHD (ACHD) population grows, understanding their heightened risk for comorbidities, especially from cardiovascular events, becomes increasingly important. Recent longitudinal studies on populations of mainly Caucasians revealed a higher incidence of diabetes mellitus (DM), including type 1 (T1DM) and type 2 (T2DM) in individuals with CHD compared to non-CHD individuals. The prevalence of DM, a major cardiovascular risk factor, is rising globally, particularly T2DM. Despite known cardiovascular risks and associated health disparities, the relationship between CHD and DM remains underexplored in diverse populations.

Objectives: This study investigated the association between CHD and DM (T1DM and T2DM) in participants enrolled in the NIH All of Us Research Program (AoURP), a community participants-based precision health initiative with comprehensive healthcare and medical data from nearly one million diverse U.S. participants.

Methods: This case-control study utilized Controlled Tier Electronic Health Record (EHR) data from the AoURP Curated Data Repository (v7). Participants aged ≥18 years with CHD and DM were identified through condition concept sets using the Cohort Builder tool. Non-CHD controls were matched and down-sampled to five times the size of CHD subjects. Multifactorial logistic regression analyses were performed using SAS Studio on All of Us Researcher Workbench (AoURW) cloud platform.

Results: A total of 31,754 participants were analyzed, including 5,294 (16.7%) with CHD and 26,460 (83.3%) without CHD. Among CHD participants, 67% had no DM, 31.8% had T2DM, and 1.2% had T1DM. In the non-CHD group, 79% had no DM, 20.5% had T2DM, and 0.5% had T1DM. CHD was significantly associated with increased odds of DM (OR 2.120, 95% CI 1.974-2.277, $p<0.0001$), including T2DM (OR 2.076, 95% CI 1.932-2.232, $p<0.0001$) and T1DM (OR 2.264 95% CI 1.667-3.075, $p<0.0001$). Stratification by severity showed that acyanotic CHD was associated with increased odds of DM (OR 2.093, 95% CI 1.933-2.266, $p<0.0001$), T2DM (OR 2.040, 95% CI 1.883-2.211, $p<0.0001$), and T1DM (OR 2.436, 95% CI 1.747-3.397, $p=0.0001$). Cyanotic CHD demonstrated higher risks for DM (OR 2.195, 95% CI 1.896-2.540, $p<0.0001$) and T2DM (OR 2.180, 95% CI 1.880-2.527, $p<0.0001$) but no significant association with T1DM.

Conclusion: This novel analysis leverages the diverse NIH AoU database to examine the association between CHD and DM, addressing the limitations of prior studies with homogeneous cohorts. ACHD patients face a significantly increased risk of developing DM, particularly T2DM, compared to those without CHD, with cyanotic CHD associated with higher odds. These findings underscore the importance of targeted screening and management strategies of DM in ACHD patients to mitigate long-term cardiovascular risks and improve overall health outcomes.

Male Condom Catheters vs. Indwelling Catheters: A Meta-Analysis on CAUTI Prevention

Michaela Kop, BS[1], Ana Danko, BS[1], Colby Watase, BS[1],
Heather Zimmerman, BS[1], Francisco Mercado Jr., MD[1,2]
[1]University of Hawaii John A. Burns School of Medicine
[2]Tripler Army Medical Center

BACKGROUND: Catheter-induced urinary tract infections (CAUTIs) are a leading cause of morbidity and mortality among hospitalized patients. Various strategies, such as the use of male condom catheters, have been implemented to reduce the incidence of CAUTIs. However, the effectiveness of male condom catheters in preventing CAUTIs remains uncertain. This study aims to systematically summarize existing research and conduct a meta-analysis to evaluate the impact of male condom catheters on CAUTI rates.

METHODS: In accordance with PRISMA guidelines, we searched PUBMED, MEDLINE, EMBASE, ClinicalTrials.gov, and WHO ICTRP for all peer-reviewed articles and clinical trials from inception to June 31, 2024, using keywords such as “condom catheter,” “male wicking device, “male pure wick,” “penile sheath,” “male external urine device,” and “male external wicking.” Two independent reviewers selected publications for inclusion using the COVIDENCE platform. We summarized the studies by population age, setting, outcomes, and limitations. We conducted a meta-analysis using the random effects model (REM) on CAUTI incidence, asymptomatic bacteriuria, CAUTI incidence rates per patient and device days, and the Indwelling Catheter Utilization Ratio (ICUR). The quality of evidence was assessed using the ROBINS-I tool for observational studies and the Covidence tool for randomized studies, with outcomes displayed as odds ratios (OR) with 95% confidence intervals (CIs) in Forest plots.

RESULTS: Of 1,545 publications, 45 studies were included in the systematic review, comprising 43 observational studies and 2 randomized controlled trials (RCTs). The meta-analysis focused on 12 articles with complete methodology and outcome details, along with 8 peer-reviewed abstracts regarding catheter-associated urinary tract infections (CAUTI) per 1,000 device days incidence rate ratio (IRR), CAUTI per 1,000 patient days IRR, and indwelling catheter utilization rates (ICUR). Most studies involved male patients aged 18 to 80 with spinal cord injuries, primarily conducted in the USA and ranging from acute spinal centers to community nursing homes. The meta-analysis indicated a 34% increase in UTIs among male condom catheter users, but this was not statistically significant odds ratio (OR 1.34, CI 0.81-2.22), with moderate heterogeneity ($T^2 = 0.23$, $I^2 = 55.90\%$). Asymptomatic bacteriuria was 3% higher among these users but also not statistically significant (OR 1.03, CI 0.65-1.63) with mild heterogeneity ($T^2 = 0.07$, $I^2 = 29.79\%$). The eight peer-reviewed abstracts reported decreased CAUTI/device-days IRR of 0.33 (CI 0.09-0.56), CAUTI/patient-days IRR of 0.20 (CI 0.03-0.56), and ICUR of 0.72 (CI 0.66-0.79). However, these findings were limited by incomplete outcomes and high heterogeneity.

CONCLUSION: This systematic review evaluates the outcomes of male condom catheter use. It found no significant differences in rates of catheter-associated urinary tract infections (CAUTI) or asymptomatic bacteriuria between male condom catheters and indwelling catheters. However, the studies involved were small, had moderate to high risk of bias, and exhibited high heterogeneity. Nurse-driven protocols promoting male condom catheters showed reduced CAUTI rates and lower use of indwelling catheters, though outcome reporting was incomplete. Future studies on male condom catheters should involve larger, more generalizable populations and standardized outcome measures.

Advance Care Planning (ACP) Promoting Patient Goal-Concordant Care in an Academic Geriatrics Practice

Stephanie Lu, DO[1], Aida Wen, MD[1,2], Cody Takenaka, MD[1,2], Daniella Orias, MD[1],
Aarthi Sridhar, MD[1], Pedro Aguilar, MD[1], Maxwell Shen MD[1], Trace Kalei, MD[1],
Jacob Moore, APRN[1,2], Patricia Lee, APRN[1,2], Sarah Racsa, MD[1,2],
Gina Fujikami, MD[1,2], Kamal Masaki, MD[1,2]
[1] Department of Geriatric Medicine, John A. Burns School of Medicine, University of Hawaii
[2]Queens University Medical Group, Honolulu Hawaii

Background:
ACP is an important component of geriatric care. When goals of care are discussed and documentation easily found in the electronic health record (EHR), patients are more likely to receive goal-concordant care. It can reduce costs by reducing unwanted care, and improve palliative care for patients who desire to focus on comfort. We conducted a quality improvement project to assess patient goal-concordant care in a geriatrics practice.

Methods:
As part of a larger QI project on proper ACP documentation in the EHR, we conducted chart reviews on deceased patients to determine whether their end-of-life care was concordant with their documented wishes. Physicians (n=24) and nurse practitioners (n=16) in an academic geriatrics practice participated. Each provider identified 3 patients who had expired within the year prior to intervention, to determine whether end-of-life care was concordant with their documented wishes.

Results:
Chart reviews were conducted for N=120 deceased patients by 40 providers. The average age was 87.1 (+ 8.8) years and over half had a diagnosis of dementia. POLST forms were available for 104/120 (86.7%) of patients, and 71.7% of patients had ACP documents in the correct place in the EPIC storyboard. Of patients with a POLST, 96.2% wanted no CPR, 95.2% wanted comfort care or limited medical intervention, and 80.8% wanted no artificial nutrition or hydration. Of the 16 patients who didn't have a POLST, 15 had advance healthcare directives. Patients received full goal-concordant care 76.7% of the time, with an additional 16.7% receiving partial goal-concordant care. Place of death was as follows: Hospital=17.5%, Nursing Home=41.7%, Care Home/Foster Home=19.2%, and Home=18.3%.

Conclusion:
In a geriatrics practice, over 93% of patients received at least partial goal-concordant care at the end of life. Because each patient's situation is unique, directed and frequent goals of care discussions can identify what matters most to the patient. With a clear plan in place, concordant care is provided at the end-of-life phase of the geriatrics continuum.

Identifying Racial Differences in Clinical Presentation of Obstructive Sleep Apnea in Native Hawaiian and Pacific Islander Patients

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Introduction: Obstructive sleep apnea (OSA) is the most common sleep-related breathing disorder in the United States. Disparities in the severity of OSA have been identified in minority groups, but there has been little study of OSA in the Native Hawaiian and Pacific Islander (NHPI) population. NHPIs are disproportionately affected by obesity, a major risk factor for OSA morbidity. However, no studies have compared the clinical presentation of OSA in NHPIs to other racial groups. This study seeks to evaluate the severity of OSA in NHPIs relative to Whites in Hawaii to provide a more comprehensive understanding of the impact of OSA on this understudied population.

Methods: This study was conducted at a single-center outpatient neurology clinic and included White or NHPI patients, based on self-reported race, diagnosed with OSA between January 1st, 2013, and June 1st, 2023. Pearson's Chi-squared and Fisher's exact tests were used to identify associations between apnea-hypopnea index (AHI), race, and clinical characteristics such as body mass index and Mallampati score. Logistic regression models were utilized to estimate associations between OSA severity and race.

Results: 91 NHPI and 129 White patients with OSA were included for analysis. Among NHPIs, 78.0% were obese, compared to 48.8% of Whites ($p<0.001$). Among NHPIs, 72.5% (n=66) had moderate or severe OSA, compared to 52.7% (n=68) of Whites ($p<0.001$). There were no significant differences in Mallampati scores or the presence of retrognathia between racial groups. After adjusting for BMI, STOP-BANG score, enlarged neck circumference, and history of MI. NHPIs were 3 times more likely to be diagnosed with moderate to severe OSA than Whites (adjusted odds ratio = 3.01 [95% CI: 1.31, 7.23]).

Discussion: This study demonstrated an increased severity of OSA in NHPIs compared to Whites. Although obesity was more prevalent among NHPIs and likely contributed to OSA severity, differences persisted after adjusting for BMI, suggesting other contributing variables. Socioeconomic barriers, including limited healthcare access, low CPAP adherence, and delayed diagnoses, are potential contributors to OSA severity in minority groups. Future studies should identify factors that contribute to the late detection and inadequate management of OSA in the NHPI population and investigate interventions to facilitate earlier diagnosis and improved CPAP adherence. Additionally, further research is necessary to determine the presence of craniofacial differences that may contribute to OSA severity differences. To our knowledge, this is the first study to compare the severity of OSA in NHPIs with that of other racial groups, highlighting the need for more inclusivity of this population in sleep medicine research to improve clinical outcomes.

Racial and Ethnic Disparities in Metabolic Dysfunction-Associated Steatotic Liver Disease and Clinical Outcome: A Large Population-Based Propensity Matched Analysis

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Background: While metabolic dysfunction-associated steatotic liver disease (MASLD) has become increasingly prevalent worldwide, ethnic differences in a multi-ethnic country and importantly with a shared environment and lifestyle have not been fully examined.
Aims: To characterize MASLD and evaluate clinical outcomes among ethnic populations in the US.

Methods: Adults (aged ≥18 years) diagnosed with MASLD between January 2013 and December 2023 were identified in the TriNetX national database using the International Classification of Diseases (ICD-10) codes. A 1:1 propensity score matching was conducted to assess 3-year clinical outcomes following the diagnosis of MASLD, including metabolic dysfunction-associated steatohepatitis (MASH), cirrhosis, hepatocellular carcinoma (HCC), and all-cause mortality. Matching factors included age, gender, body mass index (BMI), hypertension, type 2 diabetes, hyperlipidemia, and smoking status. Patients with hepatitis B or C, alcohol-related liver disease, and other chronic liver diseases were excluded.

Results: A total of 373,308 White, 26,934 Asian, and 3,131 NHPI patients with MASLD were identified, with a median follow-up of 30.5 months. Among the major significant differences found, Asians had the lowest mean BMI (28.9), while NHPIs had the youngest mean age of diagnosis of MASLD (51.3 years), the highest mean BMI (37), and the highest prevalence of type 2 diabetes (48.7%). In the propensity score-matched analysis, Asians demonstrated a significantly lower risk of MASH (OR: 0.863; 95% CI: 0.765–0.974), cirrhosis (OR: 0.804; 95% CI: 0.674–0.958), and all-cause mortality (OR: 0.413; 95% CI: 0.367–0.464) but a significantly higher risk of HCC (OR: 1.572; 95% CI: 1.067–2.316) compared to Whites. Similarly, NHPIs were associated with a significantly lower risk of MASH (OR: 0.594; 95% CI: 0.419–0.842) and all-cause mortality (OR: 0.676; 95% CI: 0.497–0.921).

Conclusions: Our findings highlight the importance of considering racial disparities in the management of MASLD and preventing mortality. Risk-profiling of MASLD patients needs to include lower BMI ranges and more aggresive screening for HCC for Asians. Clinical intervention may need to be performed earlier in high-risk ethnic groups like NHPI who are presenting much earlier than other ethnicities. The significantly lower all-cause mortality in Asians and NHPI than Whites may be due to their significantly lower prevalence of MASH, which has been shown to be an independent predictor of acute myocardial infarction, a leading cause of death in MASLD patients. It should be noted that the majority of Native Hawaiians share Asian ancestry. Confirmation of MASH in MASLD patients may be increasingly important in reducing mortality in these patients.

Ethnic Disparities and Risk Factors for Early-Onset Colorectal Cancer (EOCRC): Insights from a Large Multi-Institutional Network

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Background:
EOCRC (defined as CRC diagnosed under the age of 50) in the U.S. is increasing but what factors are contributing to this trend are uncertain. Multiple factors including metabolic disease, dietary factors, antibiotics, heredity, food additives and physical inactivity and male gender have been implicated in the rising incidence of EOCRC. Furthermore, ethnic differences in EOCRC have not been fully examined in a multiethnic country with a shared environment.
Aims: To examine ethnic differences in EOCRC and further define risk factors associated with EOCRC.

Methods:
This study utilized the TriNetX National database, which includes data from over 69 participating health institutions across the USA and a study population of approximately 120 million individuals. For EOCRC cases diagnosed between 2013 and 2023 the prevalence rates of type 2 diabetes (T2DM), hypertension, low HDL-C, obesity, smoking, alcohol use disorder, family history of CRC and ethnicity were compared. Statistical comparisons were conducted using Chi-square and fisher's exact test to estimate odds ratio with 95% CI.
Results: We analyzed 246,122 CRC patients, including 36,317 EOCRC patients. For EOCRC patients, 15,655 (43.1%) were White, 1,253 (3.45%) were Asian(-Americans), and 141 (0.39%) were NHPI. The prevalence of EOCRC in CRC patients was significantly higher in the NHPI and Asian populations compared to the White population (20.1%, 16.1% vs. 13.1%, $p < 0.0001$). T2DM, Obesity, low HLD-C, hyperlipidemia, hypertension were all associated with increased risk of developing EOCRC (OR 3.20 (95% CI: 3.12-3.29), OR: 1.78 (95% CI: 1.74-1.82), OR: 4.00, 95% CI (3.88-4.12), OR 2.76 (95% CI (2.68-2.85), OR 2.65 (95% CI:2.60-2.71), respectively) . Low HDL-C was identified as ethnicity-specific risk of EOCRC in NHPI (OR: 1.64 (95% CI: 1.080-2.40). Low HDL-C and hypertension were associated with EOCRC in Asians (Ost1.30 (95% CI: 1.12-1.50), OR 1.38 (95% CI: 1.28-1.48), respectively). No ethnic-specific association was found for T2DM, obesity, hyperglycemia, alcohol disorder, nicotine dependence, family history of colon cancer.

Conclusions:
Our study demonstrates that NHPI and Asian populations have a significantly higher prevalence of EOCRC compared to White populations. The findings suggest that metabolic factors such as low HDL-C, and hypertension may be more important risk factors for EOCRC than family history of CRC in higher risk ethnic groups (Asian Americans and NHPI) than Whites.

Body Roundness Index (BRI) and All-Cause Mortality in Older Japanese-American Men: The Kuakini Honolulu Heart Program

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Introduction:

Previous epidemiological studies have found the body roundness index (BRI) as an emerging predictor for all-cause mortality. Most studies have found a U-shaped relationship, but there have been few studies in older populations or in Asians. We examined the association between BRI and all-cause mortality in older Japanese-American men over a long follow-up period of 33 years.

Methods:

The Kuakini Honolulu Heart Program is a longitudinal cohort study of cardiovascular diseases in Japanese-American men in Hawaii that started in 1965. At exam 4 (1991-93), 3,741 men ages 71-93 years participated. This population was lean, with a mean BMI of 23.4. BRI was calculated from an equation involving baseline waist circumference and height. BRI was split into quartiles for analysis, with an analytic sample of N=3,605. All-cause mortality data were available through December 2023, for up to 33 years of follow-up.

Results:

Age-adjusted mortality rates per 1,000 person-years follow-up were 106.1 in the lowest BRI quartile, decreasing to 95.6, 94.8 and 96.9 in the 2nd, 3rd and 4th quartiles respectively (p=0.145). Kaplan Meier survival curves by BRI quartiles demonstrated highest mortality in the lowest BRI quartile (log-rank test p=0.0006). Using multivariate Cox regression adjusting for baseline age, cardiovascular risk factors and common chronic diseases (coronary heart disease, stroke, cancer and COPD) with the lowest BRI quartile as reference, we found lower mortality in the 2nd, 3rd and 4th quartiles: Q2 RR=0.86, 95% CI=0.78-0.95, p=0.003; Q3 RR=0.90, 95% CI=0.81-1.00, p=0.048; and Q4 RR=0.87, 95% CI=0.79-0.96, p=0.006; p for trend=0.02.

Conclusion:

In our study of older Japanese-American men who were lean, low BRI was associated with higher all-cause mortality and higher BRI was protective. This illustrates how risk factor relationships for mortality can change in old age, compared to middle age.

Factors associated with treatment delay in patients with colorectal cancer

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Introduction: Colorectal cancer (CRC) is the second most common cause of cancer death in the United States [1]. American Cancer Society screening guidelines for colorectal cancer start at 45 years old with patients at average risk or even earlier for those with an increased risk [2]. Many modifiable factors affect prognosis including but not limited to diet, smoking, alcohol, and time of diagnosis to initial treatment (TTT) [3][4]. Studies have found that patients who had a delay in surgery of greater than one month during the covid pandemic and a TTT of greater than 31 days were at increased risk of death [4] [5]. The purpose of this study is to uncover the factors associated with treatment delay in patients with CRC.

Method: We analyzed data from patients diagnosed with CRC between 2000 and 2022 at Queen's Medical Center in Honolulu, Hawaii. Time of diagnosis to initial treatment (TTT) for Asians, Whites, and Native Hawaiian or Other Pacific Islanders (NHOPI) was assessed using the Kaplan-Meier Method. Cox proportional hazards regression models were used to identify predictors, adjusting for clinical and pathological factors.

Result: A total of 3191 patients were analyzed. NHOPI were more likely to be younger, had a higher proportion of stable microsatellite status tumors and were more likely to have Medicaid insurance or be uninsured compared to Whites and Asians.
Patients with Medicaid/uninsured status were significantly associated with longer TTT compared to those with private insurance (HR=0.773, 95% CI: 0.698–0.856, $p<0.001$). Older age at diagnosis (HR=0.995, 95% CI: 0.992–0.997, $p<0.001$) and unknown staging (HR=0.616, 95% CI: 0.534–0.710, $p<0.001$) were also associated with delayed TTT. Patients with higher tumor grade (HR=1.114, 95% CI: 1.008–1.231, $p=0.034$), stage 2 and 3 (HR=1.287, 95% CI: 1.161–1.426, $p<0.001$), and female gender (HR=1.141, 95% CI: 1.061–1.226, $p<0.001$) were associated with shorter TTT. Microsatellite instability status had no significant impact on treatment timing.

Conclusion: Medicaid/uninsured status was strongly associated with longer TTT. Longer TTT were also observed in elderly patients and those with unknown staging. No significant racial differences in TTT were observed. The prolonged TTT observed among patients with Medicaid or uninsured status, as well as elderly patients, may be attributed to systemic barriers and logistical challenges, such as limited access to specialists, along with patient-related factors such as multiple comorbidities.

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POSTER PRESENTATIONS

A case of oral anaerobic shoulder septic arthritis with humeral osteomyelitis

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Introduction: Septic arthritis, with an incidence of 4–12 cases per 100,000 person-years, is typically monoarticular and involves the knee or hand (interphalangeal or metacarpophalangeal) joints. The shoulder is involved in approximately 12% of cases and is more common in those with underlying joint abnormalities or immunocompromise. Staphylococci or Streptococci comprise the majority of cases, with occasional gram-negative involvement versus rare anaerobic or oral flora involvement.

Case Presentation: We report the case of a 38-year-old man, with no past medical history, who initially presented to an urgent care facility with right arm pain after heavy lifting at work. Plain radiographs were negative for acute processes or glenohumeral arthritis. He was treated with oral analgesics and activity modifications. However, he experienced progressive right arm pain with development of erythema and subsequent night sweats over the next five weeks.

He eventually presented to the ER for re-evaluation, denying any further shoulder trauma, penetrating injury, recent tattoos, IV drug use, or other joint pains. He was afebrile and with erythema and fluctuance over the posterolateral deltoid and triceps, without superficial skin wound, in addition to poor dentition. Active and passive range of motion of the right shoulder caused moderate pain but was overall preserved. Preliminary CT revealed glenohumeral joint effusion, bony erosion of the humeral head, and inflammatory changes of the deltoid without obvious abscess.

He was treated empirically with vancomycin and ceftriaxone, with several days of interval oral cefpodoxime and doxycycline after he left the hospital to arrange childcare, before undergoing surgical debridement. Serial blood cultures were negative, as were intraoperative cultures, taken after six days of IV versus oral antibiotics. He was discharged with two weeks of oral linezolid and amoxicillin-clavulanic acid while awaiting further testing. Broad range DNA PCR of intraoperative samples were also negative, though serum cell free DNA (cfDNA; "Karius") testing was positive for Actinomyces israelii, Porphyromonas gingivalis, and Fusobacterium nucleatum. He was then treated with an additional six weeks of amoxicillin-clavulanic acid, with resolution of all pain and functional limitations.

Discussion: A causative organism is only identified in approximately 80% of septic arthritis cases. Although traditional microbiologic data was unrevealing in our case, serum cfDNA testing revealed mixed oral anaerobes. He may have initially injured his shoulder at work, with subsequent glenohumeral seeding in the setting of transient bacteremia from his significant periodontal disease. Our patient made a complete recovery with oral, anaerobic-directed, antibiotic therapy, revealing a viable method of treatment for future cases.

Disability Status and Perceptions Among Medical Students in Hawaii

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Background: The Americans with Disabilities Act (ADA) partially defines an individual who ha disability as "a person who has a physical or mental impairment that substantially limits one o more major life activities." While about a quarter of the total U.S. adult population identifies as having a disability, one study found that in 2019 only 4.6% of U.S. medical students disclosed h a disability. Currently there is no literature on the disability status among medical students in Hawaii. The primary purpose of this study is to determine the prevalence of medical students studying in Hawaii who self-identify as having a disability. Secondary aims include assessing attitudes towards disability in medical education and careers in Hawaii.

Methods: An anonymous survey was distributed via email between August and November 202 all medical students enrolled in the 2024-2025 academic year at the John A. Burns School of Medicine (JABSOM), the only medical school in Hawaii. The survey consisted of 13 closed-ende questions with a space provided for comments.

Results: There were a total of 125 responses. Gender breakdown reveals that 60% of the samp identified as cis-women, 37.6% as cis-men, and 2.4% as nonbinary. The most common races/ethnicities reported were East Asian (69.6%) and Non-hispanic White (24.8%), with 31. identifying as more than one race/ethnicity. Of the sample, 9.6% (12) of students self-identifie having a disability according to the ADA definition. Respondents could check as many disabiliti were applicable. Disability options selected were neurodivergent (6), psychological/mental (5 learning disability (3), chronic illness (3), blind (1), deaf (1), upper body physical disability (1) lower body physical disability (1), and issues with mobility (1). The majority (83.3%) reported onset of their disability prior to starting medical school. 16.7% of respondents with disabilities assistive technology. All found that without accommodations their disability interfered with studying or participating in medical school. However, only 25% of these students reported rec accommodations. Nineteen respondents (15.3%) believed that JABSOM is highly inclusive for students with disabilities. The large majority of students found it to be moderately (53.2%) or slightly (30.6%) inclusive. One student felt the school is not at all inclusive. In contrast, only on student thought that the medical profession for physicians with disabilities is highly inclusive, 29 (23.2%) students believed it is not at all inclusive.

Conclusion: The prevalence of medical students with disabilities in Hawaii is far less than that general U.S. population, with the most common disabilities being non-physical. While all stude who identified as having a disability found that without accommodations their disability interf with medical school participation, only a minority received accommodations. This could be du explicit or implicit barriers and/or biases in the medical school acceptance and accommodatio processes. Additional studies are needed to further assess why the disabled community is underrepresented in medical student education and why those who are present do not report adequate accommodations.

Impact of a Multidisciplinary Team Model on Discharge Efficiency, Accuracy, and Internal Medicine Resident Perceptions on Discharge Planning

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Background: Efficient discharge planning is crucial for improving hospital capacity strain and patient care. Multidisciplinary rounds (MDRs) have demonstrated effectiveness in enhancing communication and care coordination, but their specific impact on resident teaching teams has been less studied.

Objectives: To evaluate the effect of embedding dedicated case managers (CMs) and social workers (SWs) into internal medicine (IM) resident teaching teams on discharge efficiency and accuracy. This study also explores how the interdisciplinary team model influences trainees' perceptions of team roles, self-reported ability to discharge patients effectively, and available time for other clinical training activities.

Methods: We conducted a retrospective study at The Queen's Medical Center comparing two resident multidisciplinary teaching (MDT) teams that included dedicated CMs and SWs with two standard care teams over eight months (October 18, 2023 – June 25, 2024). The outcomes assessed included length of stay (LOS), expected discharge date (EDD) accuracy, readmission rates, and the rate of conditional discharge orders placed. Additionally, we administered a voluntary, electronic 3-part survey to the resident trainees from The University of Hawaii Internal Medicine Residency Program (UHIMRP) to gather feedback on their experiences working with MDT members.

Results: A total of 1944 patients were included. The MDT teams showed significantly improved EDD accuracy (72.0% vs. 66.7%, $p = 0.0120$) and more frequently placed conditional discharge orders (61.7% vs. 43.8%, $p < 0.0001$) compared to standard care teams. Among 38 survey respondents (65.5% response rate), 68.4% reported experience with the MDT teams. Over 65% of respondents stated that their ability to identify discharge barriers and facilitate timely discharges had "markedly increased" compared to six months earlier. Additionally, 67.6% of residents reported CM/SW continuity "Significantly" improved patient care, 50% reported CM/SW interactions allowed "Significantly" increased time for education, and 67.7% reported CM/SW coordination of disposition issues allowed residents to spend "Moderately" or "Significantly" more time for patient care. 74.9% of the residents correctly delineated the CM and SW roles and responsibilities.

Conclusions: Embedding dedicated CMs and SWs in resident teaching teams enhances discharge planning efficiency by improving EDD accuracy and increasing the use of conditional discharge orders. Residents also reported improved ability to identify and address discharge barriers, enhanced patient care, more time for educational activities and patient interactions, and greater clarity regarding CM and SW roles. These findings support the integration of MDRs into IM residency programs to optimize discharge planning and resident education.

An Algorithm to Reduce Unnecessary Echocardiograms: Validation and Insights From the Largest Registry of NHPI Patients with Syncope

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Intro:
Structural cardiac causes of syncope detectable through transthoracic echocardiography (TTE) account for only a small fraction of common underlying issues. Despite its low diagnostic yield—estimated at just 1%—TTE is frequently overutilized in syncope evaluations. Additionally, there is a notable lack of data on the prevalence and causes of syncope among Native Hawaiian and Pacific Islander (NHPI) populations.

Methods:
To minimize unnecessary TTEs in syncope evaluations, we conducted a comprehensive literature review and developed a highly sensitive algorithm to guide clinicians on when an echocardiogram is warranted. This algorithm integrates established risk stratification tools and patient-specific risk factors linked to structural cardiac abnormalities.

The algorithm was retrospectively applied to patients from a newly created registry encompassing all individuals presenting with syncope who underwent TTE at two major healthcare centers in Hawaii. Using manual chart review, this registry of 471 patients was utilized to validate the algorithm and examine the prevalence of cardiac causes of syncope among disaggregated NHPI and Asian populations.

Results:
Orthostatic hypotension (28.6%), idiopathic syncope (22.8%), and arrhythmias (13.2%) were the most prevalent causes of syncope. In 95.2% of cases, TTE did not contribute to the diagnosis. Structural cardiac causes were more frequently observed in NHPI and Filipino patients (8.1% and 5.1%, respectively), while Chinese and White patients had the lowest rates (2.4% and 2.6%, respectively). The implementation of the algorithm reduced TTE orders by 21.7%, maintaining 100% sensitivity and achieving 23% specificity. This approach resulted in a $270 cost reduction per syncope evaluation at our institution.

Conclusion:
This highly sensitive clinical decision-making tool offers a safe and efficient way to reduce unnecessary imaging and healthcare expenses while minimizing associated risks. NHPI experience structural cardiac-related syncope at rates over three times higher than White patients, highlighting their status as a high-risk, underserved population that warrants greater attention and further research.

Characterization of Guam's Physician Workforce: Historical and Current Trends

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Introduction: The United States (US) Pacific Island Territory of Guam is home to the most geographically distant domestic healthcare workforce in the US.3 Despite a longstanding shortage of healthcare workers and healthcare strains, there are no published reports of Guam's physician workforce capacity. High rates of non-communicable diseases and the effects of climate change concertedly burden the island's disproportionately underserved population.3,9 Characterizing the number and specialty distribution of Guam's physician workforce is critical to assess its capacity to support Guam's rapid development.2 Moreover, with the US Department of Defense's plan to expand its military presence in the Pacific, understanding the limited healthcare resources in Guam through its physician workforce is vital.4,5

Methods: A study was conducted to quantify active self-reported licensing and specialty data from the Guam Health Professions Licensing (GHPL) Board physician database between 1914-2024 from the Guam Department of Public Health and Social Services. Physician location was determined by the primary practice address, as registered to the physician's NPI number. Guam population data was sourced from the 2020 US Census. Specialty categories were based on the Association of American Medical Colleges' US Physician Workforce Data Dashboard. National physician rates per 100,000 were also derived from the US Physician Workforce Data Dashboard. All data analysis and graphical representations were performed using RPosit Cloud.

Results: As of January 2024, 517 licensed physicians were identified on Guam, with 169 (##%) holding a primary practice address on the island. Among these 169 practicing physicians, the majority are concentrated in subspecialties of internal medicine (49; 29.0%), followed by family medicine (31; 18.3%), emergency medicine (16; 9.5%), and pediatrics (11; 6.5%). There were fewer than three providers in pulmonary/critical care, hematology/oncology, infectious disease, geriatrics, dermatology, endocrinology, sleep medicine, sports medicine, neurology, and cardiovascular disease. Furthermore, certain specialties, such as gastroenterology, medical oncology, and rheumatology, had only one provider. There are no current radiation oncologists. The general surgery and obstetrics/gynecology (OB/GYN) specialties were limited, with only six and five providers, respectively. When compared to the U.S., Guam exhibited a lower physician density across all specialties. General surgery is closest to the national average, while psychiatry had the greatest disparity in representation. Over the past century, the number of physicians with active licenses in Guam has increased from 1965 to 2000 and accelerated sharply between 2015 and 2019. However, certain specialties, notably psychiatry and OB/GYN, have seen little change during this period.

Conclusions: Across all specialties, rates of Guam physicians per 100,000 are lower than the national average notably in Obstetrics/Gynecology and Psychiatry, serving to contextualize reports of high local fetal mortality rates and suicide, respectively.46–8 Furthermore, specialists in Anesthesia and Pathology continue to remain low, while Radiation Oncology has zero on-island specialists. Local and federal policy makers must acknowledge this trend and ensure that distribution of federal resources reflects the needs of the island's rapidly growing population.

Outpatient Management of Severe Anemia in a Jehovah's Witness with Bleeding Leiomyoma: Navigating Ethical Challenges

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Introduction: Managing chronic anemia with hemoglobin levels below 5 g/dL is particularly challenging in outpatient primary care settings, especially when patients, such as Jehovah's Witnesses, choose not to receive blood transfusions due to religious beliefs. In cases of severe anemia from bleeding leiomyomas, the decision to defer transfusions and emergency department referral creates a unique therapeutic dilemma, requiring careful, patient-centered approaches to ensure safety while respecting patient autonomy. We present a successful outpatient management of severe anemia from bleeding leiomyoma in a patient declining blood transfusion.

Case Presentation: A 51-year-old woman (G2P2) with a history of severe anemia caused by chronic blood loss from a bleeding leiomyoma presented for management at our primary care clinic. She has experienced over five years of persistent and unpredictable vaginal bleeding, typically using 3-4 fully soaked pads daily, with severe days requiring up to 10 pads. Ultrasound revealed a 4.7 x 3.8 x 4 cm intracavitary submucosal fibroid, and an endometrial biopsy showed a weakly proliferative endometrium without hyperplasia or malignancy. Due to complex social circumstances, she could not continue care with her previous gynecologist. Despite multiple visits to the emergency department with hemoglobin levels as low as 3.4 g/dL, she has consistently refused blood transfusions due to her religious beliefs. She has been offered various medical and surgical treatment options, which she fully understands after conducting her own research. Surgical intervention was considered but deemed too risky given her low hemoglobin levels. The patient has tried both Depot Medroxyprogesterone Acetate (DMPA) and Tranexamic Acid without relief. Remarkably, despite consistently having hemoglobin levels below 5 g/dL, she appears well-mentated, is asymptomatic, and has stable vital signs. While she continues to defer transfusions, ED referral, and surgery, she agrees to receive iron sucrose 100 mg/5ml IV infusion if her hemoglobin falls below 7 g/dL. Although she continues to experience ongoing vaginal bleeding, she has clearly stated her decision to live with it, fully acknowledging the risks involved. We continue to monitor her symptoms, hemoglobin levels, and need for IV iron transfusions regularly.

Discussion: This case highlights the critical role of patient autonomy, a core bioethical principle in healthcare. Patient autonomy ensures that individuals have the right to make informed decisions about their treatment, even when these choices differ from standard medical recommendations. In this case, the patient consistently refused blood transfusions and surgical interventions, aligning her decisions with her religious beliefs. Despite the clear medical risks associated with her critically low hemoglobin levels and ongoing blood loss, she made informed choices based on her values.

Syncope after Swallowing - An Unusual trigger for Activation of the Vasovagal Cardioinhibitory Response

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Introduction: Across all age groups, vasovagal syncope as a form of reflex syncope is the most common cause of syncopal events (1). The primary physiologic mechanisms of vasovagal syncope include a neuroendocrine component, and a hemodynamic response involving the cardioinhibitory events of bradycardia, sinus pauses, and hypotension (2). While situational triggers are frequently cited as an etiology for the vasovagal response, direct mechanical stimulation of the vagus nerve leading to syncope is not common. Furthermore, provocation of the vagus nerve from esophageal distension (except from procedures such as transesophageal echocardiography) is rare (3).

Case Description: We present a case of a 77-year -ld female who presented to the emergency department after a syncopal episode that occurred during breakfast. The patient reported chest discomfort after swallowing a food bolus followed by a prodrome of lightheadedness and tunnel vision. She lost consciousness as she attempted to walk to her bedroom to lay down. Her spouse, who did not witness the event but immediately found her on the carpeted floor seconds after hearing a loud noise, denied tonic-clonic activity or urinary incontinence. The patient regained consciousness in less than thirty seconds. This syncopal episode was the latest of recurrent, and increasingly frequent, syncopal episodes since one year prior. Each episode was preceded by deglutition. Recent outpatient cardiac work-up included an EKG and echocardiogram, which were unremarkable.

On triage, the patient denied lightheadedness, shortness of breath, chest pain, or palpitations. Physical examination was unremarkable aside from minor facial trauma from her fall. EKG indicated sinus rhythm with a normal rate. Triage vitals were normal and negative for orthostatic hypotension. Maxillofacial CT revealed a subtle right nasal process fracture. No acute findings were seen on chest x-ray or on head and cervical spine CT.

The patient was admitted to telemetry for further investigation. During dinner, the patient was observed with acute diaphoresis and a syncopal episode after swallowing a bolus of food as monitored heart rate slowed to 30 beats per minute. Telemetry revealed multiple sinus pauses, the longest of which lasting 3.7 seconds. The patient regained consciousness within seconds. Post-deglutition syncope and near-syncope events with associated bradycardia and sinus pauses persisted throughout the hospitalization. Repeat TTE performed on hospital day 3 was unremarkable for valvular or wall motion abnormalities. Ejection fraction was normal. Upper endoscopy performed on hospital day 3 revealed residual food resting above a partially obstructing Schatzki ring in the distal esophagus. Balloon dilation was performed. Post-procedurally, sinus pauses, bradycardia, and syncope ceased to occur with swallowing food.

Discussion: It was theorized that mechanical stimulation of the vagus nerve through excessive esophageal stimulation due to a schatzki ring resulted in the patient's vasovagal events. Dilation of the ring was thought to result in decreased distension of the esophagus and thereby avoid repeat vasovagal syncope. Considering the wide variety of situational triggers that can result in vasovagal events, a detailed history and physical examination including thought towards the anatomy of the vagus nerve and related structures should be included.

Impact of Photoaging Software on the Sun-Protective Behaviors of Hawai'i Pickleball Players

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Introduction: Pickleball is a popular sport in Hawai'i, where outdoor courts expose players to significant UV radiation. With Hawai'i's high UV index, sun protection is essential, as outdoor activities like pickleball elevate the risk of skin cancer, including melanoma. While health-focused sun-safety interventions have been shown to increase awareness of skin cancer, they may not be the most effective at driving sun-protective behaviors. Studies indicate that appearance-based sun-safety education, which emphasizes the impact of UV exposure on premature aging, could be more effective in encouraging sun-protective actions.

Objective: This study investigates whether appearance-based education utilizing photoaging software improves sun-protective behaviors among Hawai'i pickleball players more than health-based education alone.

Methods: Participants completed baseline surveys assessing demographics, sun-safety attitudes, and behaviors. They were then divided into two groups: Group A received only an educational session, while Group B received the same educational session along with photoaged images of themselves. Follow-up surveys were administered immediately post-intervention and again at a 1-month interval to assess changes in attitudes and behaviors. Responses were recorded on a Likert scale, converted to numerical scores, and analyzed to compare pre- and post-intervention changes between Groups A and B.

Results: Participants completed baseline surveys to gather information on demographics, sun-safety attitudes, and behaviors. They were then assigned to one of two groups: Group A received an educational session only, while Group B received the same session along with photoaged images of themselves. Follow-up surveys were conducted immediately after the intervention and again one month later to evaluate changes in attitudes and behaviors. Responses were measured using a Likert scale, converted to numerical scores, and analyzed to compare pre- and post-intervention changes between the two groups.

Discussion: Preliminary findings suggest that appearance-based education, including the use of photoaging software, may be more effective than health-based education alone in enhancing sun-safety behaviors among Hawai'i pickleball players. This approach appears to better influence UV risk perception and the intention to adopt protective measures, particularly among individuals with initially low levels of sun-safety education and behaviors. At the 1-month follow-up, both groups showed significant improvements in sun-safety beliefs and practices, with the appearance-based group demonstrating greater progress. Additional data collection will increase the sample size to improve the power of the study and better assess the impact on a larger population.

A Rare Case of Left Ventricular Thrombus in a Patient with a Normal Ejection Fraction

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Introduction: Left ventricular (LV) thrombus is a well-known complication in the setting of anterior myocardial infarction (MI) and severely reduce left ventricular ejection fraction (LVEF). The incidence of LV thrombus has significantly decreased over the years given the use of early reperfusion therapies. Certain cardiac conditions with reduced LVEF, such as myocarditis, can also precipitate LV thrombus formation. However, it is much rarer in the setting of a normal LVEF, with only 33 cases currently documented in the literature. We present a case of a patient who presented with right renal and splenic infarct found to have an apical LV thrombus in the setting of myocarditis but a normal LVEF.

Case Presentation: The patient is a 32-year-old active-duty male with a past medical history of Hashimoto's thyroiditis who presented with right sided flank pain. CT angiography showed mid/lower pole right renal infarcts and splenic infarcts, suggestive of an embolic event. Transthoracic echocardiogram (TTE) with contrast demonstrated a mobile 1.8x1.2 cm echodensity in the LV apex, consistent with an apical thrombus, with a normal LVEF (50-55%). We started the patient on apixaban for treatment. Follow-up TTE obtained 12 days later showed resolution of the LV thrombus with a persistently normal LVEF (60-65%). Cardiac MRI showed late gadolinium enhancement in the inferior apical wall with edema, consistent with myocarditis, along with extensive scarring with endocardium involvement. Coronary CT angiography otherwise showed minimal stenosis in the coronary arteries, ruling out obstructive coronary artery disease as a cause. Thorough hematologic workup was negative for the presence of a hypercoagulable state. Although repeat TTE did not redemonstrate the LV thrombus, it was recommended he continue anticoagulation with apixaban for a total duration of 6 months. We also placed the patient on activity restriction given his diagnosis of myocarditis.

Discussion: Formation of LV thrombus with a normal LVEF is rare and is classically seen after anterior MI, dilated cardiomyopathy, or in reduced LVEF < 30%. There is also an increased risk of developing thrombus in acute myocarditis thought to be due to increased inflammation and stasis associated with a reduced LVEF. However, our patient's LVEF was normal, highlighting the rarity of his clinical presentation. Although traditional teaching is to use warfarin for the treatment of LV thrombus, there is increasing evidence from randomized control trials to show that direct oral anticoagulant (DOAC) to be non-inferior to warfarin, leading to the recommendation of DOAC use as an alternative to warfarin in the 2021 American Heart Association (AHA)/American Stroke Association stroke guideline and the 2022 AHA LV thrombus scientific statement. Our patient demonstrated apparent resolution of his LV thrombus on repeat echo after only 12 days of apixaban, suggesting good efficacy of DOAC therapy. In conclusion, this case emphasizes the importance of maintaining a high index of suspicion for patients with LV thrombus, even in the setting of a normal LVEF with the absence of typical risk factors, and the consideration using DOAC as a first-line therapy for LV thrombus management.

Unexplained Hemoptysis to Renal Clarity:
A Diagnostic Journey to Lymphangioleiomyomatosis

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Background: Lymphangioleiomyomatosis (LAM) is a rare and progressive disease affecting women, with an annual incidence estimated at 3.4 to 7.6 per 1,000,000. LAM is characterized by the cystic destruction of lung, kidney, and lymphatic tissues due to the abnormal proliferation of smooth muscle-like cells. Most commonly diagnosed in women of reproductive age (20–40 years), LAM exists in two forms: sporadic LAM and tuberous sclerosis complex (TSC)-associated LAM. While the clinical manifestations overlap, the two forms have distinct pathophysiologic underpinnings. Both forms typically present with pulmonary symptoms (approximately 66%), including progressive dyspnea, spontaneous pneumothorax, and pleural effusion. Notably, hemoptysis is an uncommon presenting symptom, occurring in fewer than 10% of cases and rarely prompting the diagnosis. Extrapulmonary manifestations such as renal angiomyolipomas (AMLs) are rarely symptomatic on presentation but are present in approximately 30% of sporadic LAM cases and over 80% of TSC-associated LAM cases.

Case: We report the case of a 31-year-old female with a history of untreated latent TB, prediabetes, recent Roux-en-Y gastric bypass surgery, and chronic right leg neuralgia who presented to the emergency department with chest pain, cough, hemoptysis, and hypoxia. On admission, she met 3/4 SIRS criteria, raising concern for sepsis pneumonia, and possible TB. CTA of the chest demonstrated bilateral ground-glass opacities, small cysts, and a right-sided perinephric hematoma.

Extensive diagnostic testing was performed to identify the underlying cause. Tests for TB, including sputum cultures, were negative. A comprehensive serologic workup (including antineutrophil cytoplasmic antibody [ANCA], antinuclear antibody [ANA], anti-dsDNA, C-reactive protein [CRP], and complement levels) also yielded negative results. While the patient's hemoptysis improved, her anemia persisted, prompting a focused evaluation of then suspected right perinephric hematoma. Abdominal CT imaging revealed mid-right renal heterogeneity suggestive of malignancy, which was further supported by findings on abdominal MRI. To confirm the etiology, a CT-guided biopsy of the renal mass was performed, confirming the presence of an angiomyolipoma (AML).

The identification of the AML raised suspicion for LAM, given the association between the two conditions. A video-assisted thoracoscopic surgery (VATS) biopsy of the lung confirmed the diagnosis of LAM.

Importance: This case highlights the importance of including LAM in the differential diagnosis for patients presenting with unexplained hemoptysis and incidental renal findings, particularly in women of reproductive age. While hemoptysis is an uncommon presenting symptom, its presence, in conjunction with cystic pulmonary changes and renal masses, should prompt consideration of LAM. This case underscores the diagnostic challenges of LAM and emphasizes the need for a multidisciplinary approach to evaluate complex presentations involving the pulmonary and renal systems.

A Medically Challenging Case of Ethylene Glycol Toxicity in a Critically Ill Patient

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Introduction: Ethylene glycol toxicity remains a rarely encountered condition with significant risk to morbidity and mortality if left untreated. While exact incidence is unknown, the National Poison Data System reported 6,069 exposures in the United States in 2022, accounting for 0.6% of non-pharmaceutical toxic exposures. Here we present a complex case of severe ethylene glycol toxicity and key considerations for diagnosis and management.

Case: We saw a 21-year-old female with schizoaffective disorder, depression and ADHD who was brought in by her family after being found acutely obtunded without any nearby signs of intentional overdose. Initial evaluation was significant for a GCS of 9, tachycardia, and tachypnea, with labs revealing a severe anion gap metabolic acidosis (pH incalculable, pCO2 16.4, HCO3 of 3.7, anion gap 43), lactic acid > 14.0 mEq/L and an acute kidney injury with a creatinine of 2.7 mg/dL (baseline 0.8 mg/dL). Her acidosis improved to pH 7.1 following 4 ampoules of sodium bicarbonate and she was started on hemodialysis emergently. Screening for lithium, salicylates, beta-hydroxybutyrate, and urine toxicology screen were negative. She was admitted to the ICU and intubated for airway protection.

Additional infectious workup including a lumbar puncture proved negative, however, urine microscopy identified calcium oxalate crystals consistent with ethylene glycol toxicity. Poison control was contacted and she was started on fomepizole with eventual improvement of her metabolic acidosis and encephalopathy. Following extubation, she endorsed intentionally ingesting antifreeze in a suicide attempt and send-out testing returned confirming an elevated ethylene glycol level on admission. She was transferred out of the ICU for continued treatment and eventually discharged following clearance from psychiatry, still requiring intermittent hemodialysis for her kidney injury.

Discussion: Typically occurring as a result of antifreeze ingestion, the mortality of acute ethylene glycol intoxication is estimated between 1 and 22%. The lethal dose is approximated at 1500 mg/kg and toxicity occurs as ethylene glycol is converted into its toxic metabolites. Characteristic findings include severe anion gap metabolic acidosis, urinary calcium oxalate crystals, urinary fluorescence and hypocalcemia resulting from calcium oxalate precipitation. Severe lactic acidosis was seen in our patient however, false elevations are common due detection of glycolate by testing assays. Thus, it remains crucial to avoid misattributing acidosis to lactic acidosis, especially in patients without evidence of hypoperfusion. Co-ingestion of ethanol should also be assessed as this can delay the presentation of ethylene glycol toxicity.

As with our patient, confirming ethylene glycol ingestion or elevated serum levels may not be immediately possible. Therefore, early involvement of local poison control or toxicologists may prove pivotal in establishing a timely diagnosis. Treatment includes fomepizole and supportive care, with hemodialysis as an effective method of removing ethylene glycol and its metabolites. While data is limited, a pH <7.1, amount ingested and time between ingestion and diagnosis have been identified as signs of a poor prognosis.

Why so yellow? A Double Liver Transplant Patient with Acute Cholestatic Liver Injury

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While cholestasis is a common sequela faced by liver transplants, most cases are subclinical. However, when a liver transplant patient presents with acute cholestatic liver injury, clinicians must highly consider biliary stenosis and/or irreversible transplant damage.

A 56-year-old Filipino woman with a history of non-alcoholic steatohepatitis, now known as metabolic dysfunction-associated steatohepatitis, status post orthotopic liver transplant and orthotopic re-transplantation due to transplant fibrosis despite medication adherence, presents after a two-day history of acute scleral icterus and darkening of her urine. She consulted her transplant hematologist, who advised her obtained a comprehensive metabolic panel a day before presentation. Her liver function tests were significant for an acute cholestatic liver injury pattern, and she was immediately advised to go to the emergency department for hospital admission and workup. Upon arrival to the ED, the patient denied any nausea, vomiting, abdominal pain, and changes to her stool and bowel habits. She continues to endorse the darkening of her urine, but denied any dysuria or frequency. Of note, there was a change in the patient's immunosuppressive regimen about two months ago and a decrease in the frequency of her maintenance Tacrolimus about two weeks before presentation. A physical exam confirmed scleral icterus, but her abdominal exam was negative for tenderness, warmth, erythema, or bruit. An MRI MCRP was taken, and no significant stenosis was seen on imaging. A follow-up liver ultrasound also returned benign for any biliary stenosis. However, a liver biopsy was taken, which revealed evidence of transplant fibrosis and cholestasis. A percutaneous transhepatic cholangiogram was performed, which revealed stenosis of the choledocojejeunostomy. The patient also resumed a daily Mycophenolate mofetil and Ursodiol regimen. The transaminitis significantly improved, but a delay in bilirubin improvement was seen.

This case illustrates the importance of evaluating for biliary stenosis at the level of surgical anastomosis and not relying on negative imaging studies. Furthermore, this case shows the need for slow, gradual changes to immunosuppressive regimens in liver transplant patients, especially in those who have undergone re-transplantation in the past.

Beyond the Rash: Diagnosing M-pox in a Patient with Fever and Bloody Diarrhea

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Introduction: Monkeypox (M-pox) is a zoonotic orthopoxvirus infection that has gained global attention due to recent outbreaks beyond its endemic regions in Central and West Africa. Initially described in 1958 and first identified in humans in 1970, M-pox shares clinical similarities with other viral exanthems, particularly smallpox and molluscum contagiosum, and can present with a wide spectrum of symptoms. Transmission occurs through contact with infectious lesions, body fluids, and respiratory droplets. We present the case of a young gentleman with a complex clinical presentation that initially led to an anchoring bias toward a diagnosis of herpes simplex virus (HSV), ultimately revealing a concurrent diagnosis of M-pox.

Case Presentation: A healthy 21-year-old male presented with a two-week history of fever, generalized weakness, and diarrhea with watery brown stools that turned bloody on the day of admission prompting an ED visit. He endorsed tenesmus, burning anal pain, and non-tender pustular rash developing over his arms, legs, and trunk but sparing palms and soles. Social history is pertinent for multiple sexual encounters with multiple male partners over the past year, including receptive and insertive intercourse with rare protective barrier use. On presentation, temperature: 38.9C, digital exam showed red bright blood and skin was remarkable for small numerous, disseminated, pustular, non-tender lesions over the arms, legs, and trunk, but sparing palms and soles. Workup was remarkable for leukocytosis and Group A streptococcus bacteremia. Further infectious workup was negative for HIV and syphilis. The rectal swab was positive for Campylobacter jejuni and HSV-1. CT imaging revealed diffuse rectal thickening suggestive of proctitis. The patient was started on valacylovir for HSV-1 proctitis and presumed HSV-1 rash, but surprisingly his pustules increased in number despite treatment which prompted further investigation. Skin biopsy demonstrated histologic findings of viral cytopathic effects. Immunochemical studies were negative for HSV1/ 2 and VZV. Skin swab was positive for M-pox. He was considered for tecovirimat but due to mild M-pox infection, he was managed conservatively and later discharged home with instructions to self-isolate until skin lesions crust and heal.

Discussion: This case highlights the diagnostic complexity of M-pox, particularly in patients with overlapping symptoms. The initial clinical presentation of fever, bloody diarrhea, and pustular rash prompted a broad differential diagnosis that included bacterial infections and viral etiologies. The concurrent detection of HSV-1 and Group A Streptococcus further contributed to the diagnostic challenge, illustrating the potential for anchoring bias when multiple pathogens are identified. The confirmation through polymerase chain reaction (PCR) testing underscores the importance of molecular diagnostics in distinguishing between visually similar conditions. The patient's recovery with supportive care and isolation reinforces the understanding that most cases of M-pox are self-limiting, although severe cases may warrant antiviral therapy.

Conclusion: This case demonstrates the diagnostic and management challenges associated with M-pox, particularly when it coexists with other infections. It underscores the importance of considering M-pox in the differential diagnosis of atypical rashes, especially in high-risk populations, and the value of a multidisciplinary approach to address coexisting infections and prevent misdiagnosis.

Cirrhosis on ultrasound note to be infiltrative hepatocellular cancer on MRI

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Hepatocellular carcinoma (HCC) is the most common primary liver malignancy among adults and the fourth leading cause of cancer related mortality worldwide. HCC surveillance recommendation includes abdominal ultrasound every 6 months with or without a serum Alpha-1-fetoprotein (AFP) in patients with risk factors such as cirrhosis. HCC has various morphological subtypes: the nodular pattern of HCC is the most common variant and infiltrative HCC is most rare making up only 8 to 13% of cases. Infiltrative HCC presents as small tumor nodules in the liver, making it difficult to discern on ultrasound from cirrhosis within the liver. Accordingly, ultrasound sensitivity for HCC has been shown to decrease with lesion size; in one study, sensitivity was 85, 62, and 21% for lesions >4 cm, 2 to 4 cm, and >2 cm, respectively. On magnetic resonance imaging (MRI), infiltrating HCC typically manifests as a mild poorly defined hepatic region with heterogeneous or homogeneous aberrant signal intensity. Infiltrative HCC frequently lacks a clearly defined boundary on cross-sectional imaging and consequently fades into the background of the cirrhotic liver. As a result, infiltrating HCC is frequently not discovered until an advanced stage and has an associated poor prognosis.

A 68-year-old male with a history of obesity, alcohol use disorder, congestive heart failure, type 2 diabetes mellitus, and cirrhosis presented to the emergency room with the peripheral edema, ascites, shortness of breath and 11 pounds weight loss within a month. An abdominal ultrasound done 2 months earlier showed liver cirrhosis without ascites. A CT done during the admission noted cirrhotic changes with ascites, thrombosis in the main portal vein and superior mesenteric vein as well as multiple pulmonary nodules. MRI of the abdomen showed diffusely heterogeneous appearance of the anterior and posterior segments right hepatic lobe and the caudate lobe likely diffuse infiltrative hepatocellular carcinoma with tumor thrombus within the main portal vein. The pulmonary nodule biopsy showed metastatic hepatocellular carcinoma with extensive necrosis. The serum AFP measured to be14,690 ng/ml (normal is 0-9.0 ng/ml). Thus, our patient with cirrhosis of the liver on abdominal ultrasound was diagnosed two months later with metastatic hepatocellular carcinoma.

The sensitivity of ultrasound is compromised already in patients with obesity and cirrhosis without the additional diagnostic challenge of infiltrative HCC. Considering the poor prognosis of infiltrating HCC, limitations of Ultrasound surveillance should be evaluated.

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Giant neurofibroma in the right gluteal region in a patient with neurofibromatosis I

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Neurofibromatosis 1 (NF1), also known as von Recklinghausen's disease, affects about 1 in 3000 to 4000 individuals. The disorder is caused by an inherited or de novo mutation of the NF1 gene on chromosome 17q11.2 which regulates signal transduction pathways involved in growth, proliferation, differentiation, and apoptosis. NF1 is characterized by a clinical syndrome of skin growths, tumors, and neurologic abnormalities. Here we present a case of a 65-year-old female who was diagnosed with NF1 early in life and manifested with a devastating constellation of symptoms. The patient has widespread neurofibromas, cafe-au-lait macules, freckling in the inguinal and axillary region, lisch nodules, and pelvic schwannomas. She had multiple surgeries for recurring large neurofibromas on her back and posterior thigh that caused her significant discomfort and pain. Most notably, she had a right pelvic schwannoma excised 23 years ago that was complicated by a retroperitoneal hematoma which required evacuation, and a resultant nerve injury which left her with a permanent foot drop. The cutaneous manifestations of NF1 caused a great deal of distress and contributed to her depression.

This large neurofibroma extends from the right buttock to the right flank. The tumor progressively increased in size causing severe discomfort with sitting and making it difficult for her to recline. Magnetic Resonance Imaging (MRI) two years ago showed this to be a constellation of two large neurofibromas, one of which extends into the pelvis and is contiguous with another intrapelvic schwannoma. Neurofibromas are tumors composed of a mix of Schwann cells, perineurial-like cells, and fibroblasts that can undergo malignant transformation; schwannomas are benign tumors composed solely of Schwann cells. Although surgical resection is the most effective means of reducing tumor burden, aggressive surgical intervention was not advised for our patient in the past due to the risk for vascular, bowel and neurological structural damage. These tumors often embed themselves deeply into surrounding tissues and grow into a network of thickened nerves, making complete removal difficult and potentially dangerous. Evaluating the extent of lesions is typically done by CT whereas MRI can help provide the exact anatomic location and is the gold standard in preoperative assessment of tumors. Thus, these surgeries require a multidisciplinary approach between radiology, neurosurgery, vascular surgery, general surgery, and other fields. In light of the progression of tumor growth and the patient's symptoms, surgical intervention is now recommended to debulk the mass, improve cosmesis, and ultimately improve quality of life.

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Potts Puffy Tumor: A Rare Disorder of Childhood Presenting with Seizure and Fever in an Elderly Male

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Introduction: Frontal bone osteomyelitis with periosteal abscess formation, known as "Pott's Puffy Tumor" (PPT), has shown recent increase in documented cases. Cases reported in adulthood remain rare. PPT was initially associated with trauma, however it is now recognized as a complication of frontal sinusitis. Patients commonly present with a forehead mass and headache. Seizures and focal neurologic symptoms are uncommon among adults, reported in fewer than 5% of patients. Normal oropharyngeal flora organisms are associated with PPT, with streptococcal species being most highly associated with intracranial complications, usually manifesting as intracranial abscesses in 30% of the population. Less common complications include subdural empyema and, very rarely, superior sagittal sinus thrombosis. We present a unique case of an adult male presenting with fever and focal seizures ultimately diagnosed with PPT syndrome.

Case Presentation: A 62-year-old male was admitted via the Emergency Room with aphasia, fever and seizures with subsequent neurologic deficits. Three months prior to presentation, he had noted a non-tender forehead mass which was diagnosed as a possible lipoma. Eight days prior to his ER visit, he noted severe headaches and fever. At that time, neuroimaging revealed opacification of the left frontal sinus with bony thinning and erosion, presumed to be a mucocele, with additional noted chronic pansinusitis. He was treated with oral antibiotics for a week but was brought to the ER after developing neurologic deficits and seizures. Repeat neuroimaging revealed left frontal subdural empyema, left frontal intracranial epidural abscess and superior sagittal sinus venous thrombosis. He underwent burr hole evacuation and drain placement by neurosurgery, as well as endoscopic sinus surgery with total ethmoidectomy and sphenoidotomy. Surgical pathology grew flora consistent with sinus-based infections, however no growth of streptococcal species. Return to baseline functional status was noted after an 8-week course of intravenous (IV) ceftriaxone and metronidazole. Anticoagulation was not pursued for his sinus thrombosis.

Discussion: This case illustrates the importance of prompt diagnosis and effective treatment in the prevention of or recovery from intracranial complications of sinusitis leading to PPT. Our patient's clinical course is unique in that he presented with seizures (rarely observed in adults), in the setting of few typical risk factors for PPT, apart from a history of rhinosinusitis.

This case illustrates the myriads of severe complications that may arise from intracranial events, even in a healthy patient, and demonstrates the effectiveness of surgical intervention and aggressive antibiotic treatment in restoring neurologic function. The patient's complete recovery suggests that even in severe cases of PPT in adults, who lack the neuroplasticity of pediatric patients, providers may have cautious optimism. Overall, it is important to include PPT in the differential for adults presenting with fever and new onset seizure to prevent delayed therapy and complications.

Examining a Genomic Test in Predicting Extended Endocrine Benefit and Recurrence Risk in a Diverse Breast Cancer Population

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Background:

Extended endocrine therapy (EET) beyond the first five years for early-stage hormone receptor-positive (HR+) breast cancer can reduce the risk of late distant recurrence. The Breast Cancer Index (BCI) has prognostic value and predicts the benefits of prolonged therapy, yet no studies have explored racial and ethnic differences in its scores and their significance. This study aims to evaluate these potential differences in distant recurrence risk and predictive benefits of EET to elucidate the role of BCI in a diverse population of early-stage HR+ breast cancer patients.

Methods:

A retrospective chart review analyzed patient demographics, clinical and pathologic characteristics, and BCI scores of 159 women in Hawaii with early-stage HR+ breast cancer, self-identifying as White, Filipino, Japanese, Native Hawaiian, Other Asian/Pacific Islander, or Other. Tumor characteristics examined included size, grade, histology, lymph node and receptor status, Oncotype DX recurrence score, and cancer laterality. Logistic regression analyses used race, late distant recurrence risk, and tumor features as predictor variables. BCI prediction of benefit and distant recurrence risk served as the outcome variables.

Results:

Japanese patients had significantly lower odds of having a high distant recurrence risk compared to White patients. Other Asian/Pacific Islanders also showed a similar pattern, albeit to a lesser extent than the Japanese patients. Patients with higher distant recurrence risk had significantly greater odds of having a score predicting benefit than those with low risk. Racial or ethnic differences in predicting benefit of EET were not statistically significant.

Conclusions:

The lack of racial or ethnic differences in the prediction of endocrine benefit suggests BCI's universal applicability in diverse women with early-stage HR+ breast cancer. The decreased likelihood of high distant recurrence risk in Japanese and other Asian/Pacific Islanders implies potential variations in tumor features or other factors among different racial or ethnic groups. Our study is limited by sample size and the lack of patient data representing other racial and ethnic groups. Future studies should aim to address these issues and adjust for known breast cancer risk factors to better understand the racial and ethnic implications of BCI.

RISK FACTORS, OUTCOMES, AND INTERVENTIONS AMONG ADULT PATIENTS WITH ISOLATED BLUNT CEREBROVASCULAR INJURY WITH OR WITHOUT TRAUMATIC BRAIN INJURY: A NATIONAL ANALYSIS

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Introduction: Although rare, blunt cerebrovascular injury (BCVI) represents a significant complication of trauma, affecting up to 2.7% of all trauma patients, with morbidity and mortality rates of up to 80% and 40% respectively. The existing literature on BCVI has noticeable gaps, particularly related to outcomes of operative versus nonoperative management in patients with concurrent traumatic brain injury (TBI). This study aims to evaluate the incidence, significant risk factors, and associated clinical outcomes among adult trauma patients with BCVIs with and without TBI, in order to provide stronger evidence and establish improved guidelines towards improving overall prognosis and outcomes in this patient population.

Methods: This retrospective cohort study utilized the American College of Surgeons Trauma Quality Improvement Program Participant Use File (ACS-TQIP-PUF) database from 2017-2021. Adult trauma patients (age ≥16 years) with moderate-severe blunt injuries (ISS ≥9) and severe isolated BCVI (AIS head and neck ≥3, all other regions <3) as defined by AIS injury code description were included for analysis. Patients were stratified based on the presence or absence of concomitant mild-moderate TBI (AIS head ≤2). Risk factors for BCVI including cervical spine fracture, mandibular fracture, basilar skull fracture, and presenting GCS ≤8 were assessed. The primary outcome of interest was the incidence of ischemic stroke. Secondary outcomes included mortality rate, intensive care unit length of stay (ICU-LOS), and ventilator-free days (VFD), which were further evaluated among patients undergoing operative versus non-operative management.

Results: A total of 2,172 patients with BCVI were included in the analysis, with 1,629 (75%) non-TBI patients and 543 (25%) patients with concomitant mild-moderate TBI. Among non-TBI patients, BCVI was significantly associated with cervical spine fractures (OR 11.598, 95% CI 10.282-13.082, p<0.001), mandibular fractures (OR 2.866, 95% CI 2.110-3.892, p<0.001), GCS ≤8 (OR 1.649, 95% CI 1.219-2.230, p=0.001), and ischemic stroke (OR 19.316, 95% CI 4.706-79.279, p<0.001). Among TBI patients, BCVI was significantly associated with cervical spine fractures (OR 6.790, 95% CI 5.493-8.393, p<0.001), mandibular fractures (OR 2.098, 95% CI 1.370-3.213, p<0.001), and ischemic stroke (OR 40.666, 95% CI 9.398-175.969, p<0.001). Regarding management type, a total of 115 patients (13.8%) underwent operative management and 740 patients (88.5%) underwent non operative management. There was no significant association between ischemic stroke, in-hospital mortality, ICU-LOS, or VFDs in patients undergoing operative management.

Conclusions: Patients with BCVI had significantly higher odds of presenting with cervical spine and mandibular fractures, as well as developing ischemic stroke when compared to those without BCVI. Understanding key risk factors and presentation patterns in trauma patients with BCVI can assist with prompt diagnosis, optimizing care and improving patient outcomes.

Cutaneous Plasmacytosis Responsive to Dupilumab Treatment

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Introduction: Cutaneous plasmacytosis (CP) is a rare and often under-recognized skin disorder characterized by the presence of proliferative plasma cells in the dermis. The underlying pathogenesis of cutaneous plasmacytosis is not entirely understood, but it is thought to involve a reactive accumulation of plasma cells, possibly in response to chronic inflammation or an immunologic stimulus. This condition remains a subject of ongoing research to better understand its pathophysiology, optimal management strategies, and the potential for associations with systemic diseases. We report on a 71-year-old Filipino male with a history of systemic plasmacytosis whose cutaneous plasmacytosis was successfully managed with dupilumab, an interleukin-4 (IL-4) receptor alpha inhibitor.

Case Presentation: A 71-year-old Filipino male presented in 2013 with multiple pruritic, reddish-brown cutaneous papules and nodules primarily on the torso, but also appeared on his face and extremities. Patient's history is significant for plasmacytosis of the bone marrow, lungs, and cervical lymph nodes, diagnosed in 1997 and 1998. He had no other significant or abnormal laboratory studies. A punch biopsy of the patient's left distal bicep demonstrated dense dermal lymphoplasmacytic infiltrate, suggestive of CP. The patient's initial treatment consisted of clobetasol and short courses of prednisone. In 2016, he began Thalomid at a dose of 150mg/d which was subsequently reduced to 50mg/d and then discontinued after he developed peripheral neuropathy of sensory and proprioception. Treatment was then transitioned to clobetasol and short courses of prednisone. In 2022, the patient presented with pruritic nodules and lichenified plaques on the back and extremities that were suggestive of atopic dermatitis. This prompted a 150mg sample of dupilumab, a drug developed for treatment of atopic dermatitis. The patient's cutaneous plasmacytosis cleared significantly after the first injection, and it was nearly resolved by his second injection. Since then, his condition has been well-controlled with one shot of dupilumab every 2-3 months.

Discussion: Cutaneous plasmacytosis is typically managed with a combination of corticosteroids, antihistamines, immunomodulatory therapies, phototherapy, and chemotherapeutic agents. In this case, the patient was treated with dupilumab, a human monoclonal antibody that inhibits the cytokine responses mediated by interleukin-4 (IL-4) and interleukin-13 (IL-13). Given the significant improvement in the patient's condition following treatment with dupilumab, we propose that it may represent a promising therapeutic option for the management of cutaneous plasmacytosis in the future.

Standardization of Advance Care Planning (ACP) Documentation in the Electronic Health Record (EHR)

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Background: ACP is an important component of geriatric care. Knowing goals of care can reduce costs by reducing unwanted care, and improve palliative care for patients wishing for comfort. One barrier is the ability to find ACP documents easily in the EHR. We conducted a quality improvement project to improve consistency in storing ACP documents in the EHR. Methods: Physicians (n=24) and nurse practitioners (n=16) in an academic geriatrics practice represented four different service lines (clinic, HBPC, inpatient, and PALTC). Phase 1 was completing a needs assessment survey (pre-survey), addressing processes and challenges in locating and placing ACP documents in the EHR. In Phase 2, each service line created a standardized process map, and all service lines agreed to place ACP documents into the "Storyboard" feature in EPIC. After the new process had been implemented, providers were surveyed to assess the impact (Phase 3=post-survey). Statistical analysis used descriptive statistics and paired t-tests to compare pre- and post-survey results, assessing changes in ACP accessibility and related outcomes.

Results: The pre-survey was completed by 38 and post-survey was completed by 40 providers. In the pre-survey, only 47.5% felt it was easy to find ACP documents and 63.2% felt it was easy to place ACP documents into EPIC. In the post-survey, 72.5% felt it was easier to find ACP documents and 72.5% felt it was easier to place ACP documents into EPIC. The "Storyboard" in EPIC was used 47.4% of the time in the pre-survey, increasing to 75% in the post-survey. The most common barriers identified were: "having ACP documents in another system" (68.4%), "not enough time" (57.9%), and "no clarity about the process" (39.5%). After the intervention, only 5% still identified having no clarity about the process, and there was a significant improvement in providers rating their skills of finding ACP documents (1-5 Likert scale, 3.25 vs. 4.13, p<0.0001) and placing ACP documents into EPIC (3.15 vs. 4.13 p<0.0001).

Conclusion: ACP documents are often placed in different parts of the EHR, making them difficult to find, particularly in emergency situations. We found that it is possible to standardize processes by providing training, which improves communication between medical professionals so that care can be concordant with patient goals. We plan to extend this standardized process to other subspecialty and primary care practices throughout our healthcare system.

Incidence and types of secondary malignancies among patients with hairy cell leukemia: A systematic review and meta-analysis

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Hairy cell leukemia (HCL) is a rare, indolent, chronic lymphoid neoplasm mainly treated with purine analogs. Most HCL patients treated with cladribine achieve complete remission in 80% to 90% of cases after a single cycle of chemotherapy. However, despite the efficacy of purine analogs, concerns about long-term outcomes persist, particularly regarding the risk of secondary malignancies. Furthermore, the incidence and the time from HCL diagnosis to the development of secondary cancers remain uncertain attributed to the rarity of HCL. To elucidate the incidence, we conducted a systematic review and meta-analysis. A total of 16 studies met our eligibility criteria and were included in this review, comprising a combined total of 7,793 patients with HCL. Females accounted for 21.8% of the cohort, and the weighted median age was 55.5 years. Frontline treatments comprised purine analogs, such as cladribine and pentostatin, as well as non-purine analogs, including interferon, rituximab, and splenectomy. Among the 16 studies, nine used purine analogs alone, six used a combination of purine and non-purine analogs, and one used only non-purine analogs. As a result, the cumulative incidence of secondary malignancies was 11.5% (95% confidence interval [CI]: 8.8 - 14.9), with a higher incidence observed in patients treated with purine analogs (12.5%, 95% CI: 8.4 - 18.2) compared to those receiving non-purine analogs (4.8%, 95% CI: 3.6 - 6.3) or combination therapies (11.9%, 95% CI: 8.5 - 16.5) ($p < 0.0001$). Among the secondary malignancies observed in this study, prostate cancer was the most frequently reported, followed by skin cancer (both melanoma and non-melanoma), non-Hodgkin lymphoma, and colorectal/anal cancers. The mean time from HCL diagnosis to secondary malignancy development was 104.1 months (95% CI: 77.7 - 130.5), which was much longer than that observed in patients with diffuse large B-cell lymphoma. The mean time varied by treatment group: 66.9 months (95% CI: 54.5 - 79.4) for non-purine analogs, 115.5 months (95%: 67.9 - 163.1) for combination therapies, and 103.3 months (95% CI: 68.7 - 137.9) for purine analogs ($p = 0.032$). In conclusion, the choice of initial therapy significantly influences the risk of secondary malignancies, with purine analogs associated with a higher incidence. Furthermore, the mean time from HCL diagnosis to secondary cancer development was notably long, emphasizing the need for long-term surveillance especially in patients treated with purine analogs. A limitation of this study is the inability to ascertain whether the observed cancers are de novo, related to the underlying disease, or a consequence of treatment. Further investigation is needed to clarify these relationships.

Racial and Ethnic Disparities in Metabolic Dysfunction-Associated Steatotic Liver Disease and Liver Fibrosis: Cross-Sectional Study Using Transient Elastography

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Background and Aims:

Transient elastography (TE) is recommended for identifying individuals metabolic dysfunction-associated steatotic liver disease (MASLD) who are at increased risk for liver fibrosis. However, evidence regarding ethnic variability in TE results, particularly among Asian and Native Hawaiian/Pacific Islander (NHPI) populations, remains limited. This study aims to characterize MASLD using TE among Whites, Asians and NHPI.

Methods:

A retrospective cohort study of patients who underwent TE (FibroScan) for MASLD at a tertiary center in Hawaii from February 2015 to April 2023 was performed. Only the initial TE was used for individuals who had multiple TE. All the TE scans were performed with the XL probe. Univariate analysis was performed to compare the clinical characteristics of Asians, Whites, and NHPIs with MASLD. A fibrosis score (F score) was analyzed for each ethnicity. Patients with hepatitis B and C, and alcohol-induced liver disease were excluded.

Results:

A total of 340 patients who completed TE for MASLD were identified, including 249 Asians, 58 Whites, and 33 NHPI. NHPI had a significantly higher mean body mass index (BMI) = 33 than Asians and Whites. Whites exhibited significantly higher mean transaminase levels, with AST of 50 and ALT of 64 than Asians or NHPI. NHPI had proportionally more severe (F3-4) TE scores than Whites or Asians. Higher F-scores were significantly associated with older age, higher BMI, and diabetes status. Among those with ≥F2, NHPIs had significantly higher BMI and proportionally more individuals with F4 scores despite having the lowest mean AST/ALT levels compared with Asians and Whites.

Conclusions:

Significant ethnic variations in TE were found in our study of a multiethnic population sharing a Western environment. The decision to perform TE on NHPI should not be based on levels of transaminases as they had proportionally more F4 TE scores despite lower mean transaminase levels than Whites and Asians. Lower thresholds for BMI may need to be used for NHPI as they had proportionally more F4 TE scores at the time of initial TE.

MINOCA and a case of the vanishing STEMI

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Introduction: MINOCA represents a small but significant percentage of ST elevation MIs and comprises multiple etiologies which consist of coronary, cardiac, and extra-cardiac causes. The evaluation involves taking into account the clinical presentation as well as coronary angiogram findings and the usage of CMRI.

Case presentation: A 77-year-old female with a past medical history of sinus bradycardia, hypothyroidism, hypertension, and hyperlipidemia presented initially for cough and pre-syncopal episodes. Her cough had been present for 1 week with progressive worsening to experience episodes of pre-syncope the morning of her presentation.

In the ED, she was afebrile and vitals were normal despite a HR of 47 and a normal exam. A covid antigen test was positive and ECG noted sinus bradycardia with mild ST changes. Troponin was elevated with repeat increasing to 114. She would be transferred to another facility due to concerns regarding her presentation and abnormal labs. En-route her telemetry noted atrial fibrillation with RVR between 100-140 BPM in addition to new diffuse ST and T wave changes concerning for STEMI although in absence of chest pain. On arrival she was without chest pain and remained hemodynamically stable although experiencing palpitations. Repeat ECG showed atrial fibrillation with RVR with resolution of prior diffuse ST elevations. Cardiology decided to defer immediate coronary angiography given resolution of prior ST elevations and absence of chest pain with pursuance of medical management.

Hospital course noted further troponin increase with a peak of 3773, she continued to remain hemodynamically stable with absence of chest pain. A transthoracic echocardiogram noted normal LVEF of 55-60% and normal RV function with absence of LV or RV wall motion abnormalities. Her differential considered Acute Coronary Syndrome status post spontaneous recanalization vs COVID-19 associated myocarditis. Cardiac MRI noted normal LV size, EF 51%, low normal LV function and hypokinesis involving the basal inferior wall. Acute myocardial edema involved the basal, mid inferior, and inferior septal wall on T2 imaging with transmural late gadolinium enhancement involving the basal segment. Collectively these were concerning for recent myocardial infarction involving the proximal right coronary artery territory and not myocarditis or other infiltrative or inflammatory processes.
Coronary angiogram noted moderate caliber RCA with non-obstructive coronary artery disease involving the RCA, right Posterior Descending Artery, and right posterolateral artery. The absence of obstructive CAD despite ST elevations and troponin elevation with CMRI findings was considered as Myocardial Infarction with Non-Obstructive Coronary Arteries (MINOCA) in the setting of suspected thrombus from atrial fibrillation.

Conclusion: ST elevations represent areas of clinical concern and emergency especially in the setting of elevated troponin and the presence of chest pain. They also propose a clinical conundrum when TTE displays absence of wall motion abnormalities and when coronary angiography fails to show obstructive CAD. Evaluation of MINOCA involves consideration of the clinical presentation and usage of CMRI. The pattern of LGE on CMRI is useful to elaborate between ischemia and myocarditis given the transmural involvement in the former and subepicardial and/or mid-wall myocardium involvement in the latter.

Uncontrolled Type 2 Diabetes and Increased Risk of Early-Onset Colorectal Cancer (EOCRC): Ethnic Disparities from a Large Multi-Institutional Network

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Background: EOCRC (defined as CRC diagnosed before the age of 50) is rising in the U.S. We recently reported a disproportionate increase in EOCRC among Native Hawaiians and Pacific Islanders (NHPIs) in Hawaii compared to Whites and Asians. Similarly, Type 2 diabetes mellitus (T2DM) has significantly increased among younger individuals in the U.S. However, the association between T2DM and EOCRC remains poorly understood. Furthermore, ethnic disparities in EOCRC related to T2DM have not been thoroughly investigated in multiethnic populations sharing similar environments.

Aim: To investigate the association between T2DM and EOCRC in a multiethnic U.S. population.

Methods: This study utilized the TriNetX National database, which includes data from over 69 participating health institutions across the U.S. and approximately 120 million individuals. EOCRC cases diagnosed between January 2013 and December 2023 were analyzed. The prevalence of T2DM, including controlled T2DM (HbA1c 6.5%–8%) and uncontrolled T2DM (HbA1c ≥ 8%), was compared between non-CRC and EOCRC populations. A 1:1 propensity score matching was conducted to evaluate the odds ratio (OR) of EOCRC. The cohort included individuals aged 18–49 with controlled and uncontrolled T2DM. Matching factors included age, gender, BMI, tobacco use, alcohol use, race, and family history of gastrointestinal cancer. Statistical comparisons were conducted using Chi-square and Fisher's exact tests to estimate ORs with 95% confidence intervals (CIs).

Results: A total of 246,122 CRC patients were analyzed, including 36,317 EOCRC patients and 16,075,565 non-CRC individuals. Among EOCRC patients, 15,655 (43.1%) were White, 1,253 (3.45%) Asian, and 141 (0.39%) NHPI. T2DM prevalence was significantly higher in the EOCRC population compared to the non-CRC population across all three ethnicities ($p < 0.0001$). Within the EOCRC cohort, NHPIs exhibited a higher proportion of uncontrolled T2DM compared to Asians and Whites ($p < 0.0001$). Propensity score matching showed that uncontrolled T2DM increased the risk of EOCRC compared to controlled T2DM (OR 1.317, 95% CI: 1.195–1.451).

Conclusion: EOCRC patients have a significantly higher prevalence of T2DM compared to non-CRC individuals. Uncontrolled T2DM increases the risk of EOCRC compared to controlled T2DM. These results highlight the importance of early detection and management of T2DM as a potential strategy for EOCRC prevention.

Green Tea Reduces Risk for Incident Coronary Heart Disease Over Three Decades: The Kuakini Honolulu Heart Program

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Introduction:

Green tea consumption has been linked to a variety of health benefits including reduced all-cause mortality. However, there are mixed data on the amount of green tea required to provide protective effects against coronary heart disease (CHD). We evaluated the association between green tea consumption and incidence of CHD over a 30-year follow-up period in an older male Japanese-American population.

Methods:

The Kuakini Honolulu Heart Program is a population-based, prospective cohort study of cardiovascular disease in Japanese-American men living on the Hawaiian island of Oahu, starting in 1965. Self-reported green tea consumption data were obtained from 6,860 men as part of a Food Frequency Questionnaire during exam 3 (1971-74). After excluding subjects with missing data on green tea consumption and prevalent CHD at baseline, our analytic sample was N=5,496. Subjects were divided into 4 groups by green tea consumption: none (0 oz/week), low (1-29 oz/week), intermediate (30-59 oz/week), and high consumption (≥60 oz/week). Data on incident CHD were available from a comprehensive hospital surveillance system through December 2020, for 30 years follow-up.

Results:

Age-adjusted rates of incident CHD decreased with higher green tea consumption groups: none=12.4, low=12.3, intermediate=11.1, and high=10.8, per 1,000 person years follow-up (p for trend=0.02). Cox regression was used to calculate hazard ratios for incident CHD by green tea intake groups, using the "none" group as reference. The multivariate model, adjusted for age, FOX03 genotype, BMI, hypertension, diabetes mellitus, pack-years smoking, physical activity index, total cholesterol, and alcohol intake, showed decreased risk of incident CHD in the high green tea group (HR=0.79, 95%CI=0.66-0.94, p=0.009).

Conclusions:

In Japanese-American men, green tea consumption was associated with decreased risk of incident CHD with a significant dose-response relationship, demonstrating that higher amounts of green tea consumption (≥60 oz/week) were associated with the lowest risk of CHD compared to non-green tea drinkers.

Ethnic Variations in Clinically Significant Esophageal Stricture Formation

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Introduction:

Ethnic variability in benign esophageal obstruction (BEO) prevalence is inconsistently reported, largely due to a lack of multiethnic studies. Most data compares incidences by country, but environmental factors, which influence esophageal disorders, are difficult to control in multinational studies. Hawaii, with a stable multiethnic population (37% Asian, 23% White) sharing a similar environment and Western lifestyle, offers an ideal setting to study these differences.

Methods:

We used TriNetX, a cloud-based health research network, to analyze data from over 1 million individuals in Hawaii's largest healthcare system. Patients aged 18-100, diagnosed with ICD-10 K22.2 (esophageal obstruction) from 2008-2023, were included. Exclusions were malignancy, traumatic perforation, dyskinesia, diverticulum, Barrett's esophagus (BE) with dysplasia, and unspecified disorders. 1,060 White and 930 Asian patients met inclusion criteria. Groups were matched by age, sex, GERD, alcohol, tobacco use, and BMI. Odds ratio (OR) for BEO and Kaplan-Meier analysis was performed for GERD, esophagitis, and BE risk. Analyses were conducted for groups both including and excluding patients diagnosed with eosinophilic esophagitis (EoE) and those on PPI/H2 blocker medication.

Results:

BEO occurred at a significantly higher proportion in Whites compared to Asians with Whites having increased odds of BEO (OR 1.54, 95% CI 1.39-1.71). Excluding patients with EoE did not alter this trend. When excluding those on PPI/H2 blockers and those with EoE, Asians were still less likely to be diagnosed with BEO (OR 0.562, 95% CI 0.468-0.675). Kaplan-Meier analysis showed Asians had a decreased risk of GERD and esophagitis compared to Whites (HR 0.566, 95% CI 0.395-0.811 for GERD risk and HR 0.341, 95% CI 0.132-0.879 for esophagitis risk). However, no significant differences were found for risk of BE.

Discussion:

BEO is more common in Whites than Asians in Hawaii, even in those without PPI/H2 blocker use or EoE. EoE was significantly more prevalent in Whites than Asians as others have shown. The lower prevalence of symptomatic GERD in Asians, compounded by less esophagitis may explain the reduced risk of BEO, as GERD is a known risk factor. The significantly lower prevalence of BEO and EoE in Asians than Whites in a shared geographic environment is similar to the lower incidence of IBD in Asians than Whites in the US. These differences may point to genetic variability in GI inflammatory responses between Asians and Whites.

Acute Limb Ischemia Presenting as a Clinical Conundrum: Stroke Mimic or Aortic Dissection?

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Introduction: Acute limb ischemia (ALI) is a rare and potentially life-threatening condition with an estimated incidence of 14 cases per 100,000 people in the US annually. Underlying peripheral vascular disease is a frequent risk factor; however, thromboembolic disease frequently affects patients with normal vasculature as well. In patients with underlying comorbidities, differentiating ALI from other vascular emergencies such as stroke or aortic dissection may be challenging. Case Presentation: An 88-year-old male with history of paroxysmal atrial fibrillation (AF), transthyretin amyloid cardiomyopathy (ATTR-CM), type 2 diabetes and dyslipidemia presented with sudden onset left upper and lower extremity weakness and numbness. A code-stroke was activated upon arrival; however, computed tomography (CT) and magnetic resonance imaging (MRI) of the brain were negative for acute ischemic infarcts. ⅘ strength and palpable pulses were present in both the left upper and lower extremities. Vital signs revealed a systolic blood pressure differential, 25 mmHg lower on the left arm. CT angiography of the chest and abdomen was negative for aortic dissection, although it identified near complete occlusion of the left axillary artery, complete occlusion of the left common femoral and proximal superficial femoral arteries, and a left atrial appendage thrombus. By this time, pulses had become unidentifiable by Doppler and lactic acidosis up to 8.6 mEq/L had developed. Further questioning revealed that he had been non-compliant with his prescribed apixaban due to difficulties obtaining refills. A diagnosis of ALI secondary to cardioembolism was made. The patient underwent thrombectomy of the occluded arteries with immediate improvements in strength and pulses noted immediately after the procedure.

Discussion: The development of hemiparesis and numbness, initially without pain, pallor, poikilothermia, or absence of pulses, was highly suspicious for a cerebrovascular accident. However; negative neurological imaging necessitated further consideration of peripheral vascular ischemia, given up to 15% of patients present with painless ALI. Patients with ATTR-CM and AF develop intracardiac thrombi 10 times more frequently than those without ATTR-CM. Among patients with AF, the prevalence of thromboembolic disease is 2.4 times higher in those with ATTR-CA than in those without. They suffer from rates of peripheral embolism up to 3 times higher, occurring even in the absence of AF, and accounting for up to 28.6% of total cardioembolic events. Even amongst patients who are anti-coagulated, or with short duration arrhythmia, intracardiac thrombus occurs in up to 46% of patients. ATTR-CM must be considered a risk modifier for not only increased rates of stroke, but also peripheral embolism. While an abnormal inter-arm blood pressure differential occurs in up to 19% of healthy patients without aortic dissection, this finding, combined with lactic acidosis, absent back or chest pain, and diminished pulses should prompt consideration of peripheral ischemia. While multifocal strokes due to cardiac emboli are a well-recognized phenomenon, simultaneous emboli of both upper and lower unilateral peripheral arteries is exceedingly rare and reported in few case reports.

Conclusion: Multifocal embolic ALI in patients with AF and ATTR-CM requires special consideration and frequent reevaluation in order for prompt diagnosis and treatment.

Procedural timing of thoracenteses/tube thoracostomies of positive pleural fluid cultures

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INTRODUCTION: This investigation sought to answer whether our hospital adheres to the axiom that "the sun should never set on a parapneumonic effusion;" in other words, is there a delay in prompt thoracenteses or tube thoracostomy on weekends and/or evenings? Delayed drainage of parapneumonic effusions may result in effusions organizing into empyemas, which may worsen patient outcomes or require invasive procedures. Drainage of effusions is increasingly performed by interventional radiology (IR) providers (who may not always be in-hospital on evenings and weekends), raising concern that delays in management of effusions may be occurring.

METHODS: Data for all pleural fluid studies of adult patients between June 2022 and June 2024 with positive growth on cultures were analyzed for the following: microbiology, service conducting the procedure (IR, critical care [CC], or emergency medicine [EM]), personnel (physician assistant [PA], staff physician, resident physician), day of the week (Monday-Friday considered "weekday" and Saturday/Sunday/holidays considered "weekend"), and hour of the day (8 a.m. to 6 p.m. was considered "working hours" and 6 p.m. to 8 a.m. considered "evenings"). Exclusion criteria were as follows: cultures were considered contaminants, cultures were obtained from indwelling pleural catheters, or cultures were collected intraoperatively (and therefore not by IR, CC, or EM departments). A procedure was considered delayed if it occurred > 14 hours from presentation or transfer to our hospital. Descriptive analysis was conducted using Microsoft Excel.

RESULTS: A total of 20 positive cultures were identified meeting both inclusion and exclusion criteria. IR providers conducted pleural drainage in 17 (85%) of cases, while CC providers performed 2 (10%) of the procedures, and EM providers 1 (5%). PA's performed 10 (50%) of these procedures, with staff physicians performing 7 (35%) and resident physicians performing 3 (15%). There was no significant difference between weekdays and weekends; of the 20 positive cultures, there was an average of 3.0 "positive cultures per weekday" vs. 2.5 "positive cultures per weekend day". 10 procedures (50%) were performed between 2 p.m. and 5 p.m., with the remaining occurring between 10:00 a.m. and 6:00 p.m., with one exception at 10:00 p.m. 4/20 (20%) of cultures may have been delayed. In 2 cases, the request for a procedure was delayed due to lack of awareness of the effusion, while in the remaining 2 cases, the procedure itself was delayed due to either a request to hold anticoagulation or due to miscommunication between services. However, these delays did not specifically occur on either weekends or evenings.

CONCLUSIONS: The vast majority (85%) of thoracenteses/chest tubes were performed by IR providers during typical working hours. Delays were rare (20%) and occurred both due to delayed requests and delayed performance of procedures. Delays were not more likely to occur on weekends or evenings, suggesting that the use of IR providers does not adversely impact management of parapneumonic effusions. Future efforts to reduce delays should focus on optimizing communication between acute care services.

Complex Paraneoplastic Syndromes in Malignant Thymoma: A Diagnostic challenge

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Introduction: Paraneoplastic syndromes (PNS) are rare secondary disorders that arise from tumor secretion of peptides, cytokines, or hormones or from immune cross-reactivity between tumor and normal tissues and can affect multiple organ systems. 1 PNS are most often associated with cancer, but may be less commonly associated with other autoimmune mechanisms. 2 Thymomas are rare with an incidence of 1.3 cases per 1,000,000 person years in the USA. 3 We present a case of paraneoplastic syndrome associated with malignant thymoma diagnosed and treated after recognition of autonomic neuropathy.

Case Presentation: A 71-year-old Chinese American female presented to primary care with one-week of "exhaustion" and "restless sleep," low back pain radiating to bilateral legs, generalized itching, tingling in her fingers, "bladder weakness," constipation, and chills without fever. Six months before, she had reported alopecia and dry skin. Over the next 4 months, she developed severe hyponatremia and hypokalemia requiring hospitalization, slow-transit constipation, urinary retention requiring Foley catheter placement, and a 31% weight loss (107 lbs. to 73 lbs.). She displayed cognitive impairment (SLUMS 15/30) and became wheelchair bound. She was referred to Geriatrics for memory loss and weight loss, where recognition of dysautonomia prompted Neurology referral where mixed sensorimotor and autonomic neuropathy was diagnosed. Paraneoplastic antibody testing found elevated IgG antibodies to Contactin-associated protein-like 2 (CASPR2) and Leucine-rich glioma-inactivated 1 (LGI1). Intravenous immunoglobulin and prednisone were initiated along with symptomatic treatment of autonomic dysfunction with fludrocortisone, laxatives, and metoclopramide. CT Chest showed an anterior mediastinal mass 2.4 x 2.4 x 2.5 cm; biopsy confirmed thymoma and PET scan revealed no metastatic disease. Patient underwent extensive prehabilitation including gastrostomy tube placement prior to robotic-assisted thymectomy. Pathology showed infiltration of tumor into the pericardium and radiation was completed. Two years later she had full cognitive and physical recovery.

Discussion Our patient presented with a complex array of symptoms consistent with dysautonomia attributable to a PNS affecting multiple organ systems. Dysfunction including the endocrine (SIADH, hyponatremia despite sodium supplementation, hypokalemia), dermatologic (alopecia areata, generalized pruritis), cardiovascular (orthostatic hypotension), neurologic (insomnia, encephalopathy; and neuromyotonia - hand tingling and cramping), gastrointestinal (constipation), and urinary (retention). The thymoma's mixed antibody positivity to CASPR2 and LGI1, membrane proteins found in the central and peripheral nervous system which contribute to regulation of the localization of voltage-gated potassium channels, likely contributed to the diverse PNS presentation. Dysautonomia needs to be recognized as a syndrome with prompt workup of an underlying cause. Cardinal symptoms of autonomic dysfunction - constipation, urinary retention, orthostatic hypotension - were initially treated separately in this case with referrals to specialists and symptomatic treatment. The diagnosis of malignant thymoma resulted when her symptoms were recognized as a syndrome and further diagnosis and treatment were initiated. Clinicians should be aware that PNS symptoms may evolve over time and the development to cognitive impairment may degrade quality of reporting. Our patient represents a positive outcome in a diagnostically challenging and medically complex syndrome.

Hawaiian Medicinal Plants Used to Combat Infection – A Review of the Literature

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Introduction: Traditional healing methods have long been foundational to drug discovery. Before modern pharmacology, plant-based medicine was vital for survival and illness treatment. Plants with well-documented traditional uses are strongly endorsed for scientific and cultural exploration. Utilizing ethnobotany (the traditional use of plants) to screen plants of interest is a substantiated approach to evaluate plants for contemporary testing. Due to the catastrophic rise in antimicrobial-resistant (AMR) infections, new antimicrobials are urgently needed. Hawaiian herbal medicine, La'au Lapa'au, offers a diverse collection of species with therapeutic potential, and Hawaiians have historically relied on herbal medicine to combat infection. While some Hawaiian and Pacific plants have been laboratory-tested against pathogens, many remain underexplored. This review conducted by Tripler's Hawaiian Medicinal Plant Working Group evaluates and summarizes the current state of research on Hawaiian plants used to combat infection.

Methods: Sixty plants were identified primarily using traditional ethnobotanical literature, including La'au Hawai'i: Traditional Uses of Hawaiian Plants by Abbott, Plants in Hawaiian Culture by Krauss, and works by Arthur Whistler. We specifically queried for plants used to treat infection. Additional plants with demonstrated efficacy were included based on prior publications broadly screening Hawaiian species: Busnell & Makinodan (1950), Locher et al. (1995, 1996), and Meesakul (2023), which identified six additional endemic species with antimicrobial potential. Botanical taxonomy was confirmed via World Flora Online, and local names were checked against the Hawaiian Naturalized Vascular Plant Checklist from the Bishop Museum. Traditional uses and preparations noted in the ethnobotanical literature were organized and recorded. Using PubMed and NatMed Pro, species names and taxonomic variants were thoroughly searched. Research on pathogen screening—bacterial, fungal, viral, or parasitic—was documented, alongside studies evaluating toxicity or cytocompatibility in cell lines or animal models.

Results: Our review identified 60 plant species in the traditional ethnobotanical literature. A few species with pan-Pacific distribution, such as kukui (Aleurites moluccana), noni (Morinda citrifolia), and coconut palm (Cocos nucifera), have been extensively studied. These canoe plants, carried throughout the Pacific by Polynesians, have a higher density of unique uses. The most common use we identified was in the creation of poultices for wound care. We identified six additional Hawai'i-endemic species with antimicrobial potential. However, species endemic to Hawai'i are comparatively neglected. Even well-studied plants often lack phytochemical characterization of efficacious elements, while other species show efficacy but remain untested against additional pathogens.

Conclusion: This review highlights the potential of traditional Hawaiian medicine to address global health challenges. Integrating traditional wisdom with modern science offers a promising pathway for discovering novel agents to combat drug-resistant infections. Some endemic Hawaiian plants not previously evaluated (such as Pittosporum species) are members of genera with demonstrated antimicrobial properties and should be targeted for testing. Future work must characterize the efficacious component and therapeutic potential of identified medicinal plants.

Exploring the Link Between Mid-Life Physical Activity and Parkinson's Disease Risk in Japanese-American Men: The Kuakini Honolulu Heart Program

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Background:
The prevalence of Parkinson's Disease (PD) has doubled in the last 25 years globally and in 2019, nearly 8.5 million people were living with PD. Studies of the association between physical activity and PD risk have had mixed results. A recent study in an all-white population suggested that increased physical activity may help delay or prevent onset of PD. We studied the association of mid-life physical activity in Japanese-American men and risk of future Parkinson's disease.

Methods:
The Kuakini Honolulu Heart Program is a population-based, prospective cohort study in 8,006 Japanese-American men living on the Hawaiian island of Oahu that began in 1965. An estimate of 24- hour habitual physical activity index (PAI) used a questionnaire which specified the number of hours spent on 5 different activity levels (no activity, sedentary, slight, moderate, and heavy) over a typical 24-hour period, amongst those aged 45 to 65 years during the baseline exam from 1965 to 1968. Follow up for incident PD began 12 years after baseline and continued through 2001. Exclusions were men with prevalent PD, those who died before follow-up began, those with missing PAI, retirement, or extremely low physical activity, leaving N=5,370 as our analytic sample. Subjects were divided into PAI quartiles for analysis.

Results:
Incident PD was seen in 118 men. Average time from baseline to diagnosis was 23.8 years (range 12.8-34.7). Age adjusted incidence of PD per 10,000 person years was 18.4 in the lowest PAI quartile, decreasing to 14.7, 10.5, and 9.1 in the 2nd, 3rd, and 4th quartiles respectively (p for trend= 0.012). Using Cox regression with the highest PAI quartile as reference, after adjusting for age, triceps skinfold thickness, pack years of smoking, and intake of total daily kilocalories, fat, and coffee, risk of PD increased by decreasing quartiles of PAI (Q3 RR=1.14, 95% CI=0.64-2.06; Q2 RR=1.57, 95% CI=0.91-2.72; and Q1 RR=1.89, 95% CI=1.10-3.25, p=0.02) respectively.

Conclusions:
Findings suggest an inverse relationship between physical activity index and incidence of Parkinson's disease in Japanese-American men. Confirmation of this finding could lead to trials of physical exercise as a potential disease modifying therapy for PD.

Evans Syndrome and Stroke: A Unique Case Presentation

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Background: Evans syndrome (ES) is a rare autoimmune disorder characterized by the simultaneous occurrence of autoimmune hemolytic anemia (AIHA), immune thrombocytopenia, and, occasionally, autoimmune neutropenia. ES presents both diagnostic and therapeutic challenges due to its heterogeneous clinical features and increased risk of complications, notably thromboembolic events. Thrombotic complications, although rare, can manifest as life-threatening conditions, including deep venous thrombosis and stroke.

Case Description: An 80-year-old male with stage IIB lung adenocarcinoma on chemoradiation therapy presented with right-sided weakness. The patient experienced progressive symptoms of right foot and hand weakness over the week, in addition to a sudden onset of right facial droop two days prior to the admission. His past medical history was notable for positive results for lupus anticoagulant, cardiolipin IgG, and beta-2 glycoprotein four years prior, with no previous thrombotic events. He was previously on aspirin, which was held one week prior to the admission due to thrombocytopenia. Laboratory findings were remarkable for a platelet count of 36,000 / μL. Head CT imaging was unremarkable, but brain MRI revealed high-intensity lesions in the left frontal and centrum semiovale. The patient was diagnosed with an acute stroke of undetermined etiology in the setting of ES based on positive direct antiglobulin and Eluate tests with warm autoantibodies. After his anemia and thrombocytopenia improved following administration of intravenous immunoglobulin (IVIG) and high-dose corticosteroid for ES, anticoagulation with warfarin was initiated for antiphospholipid syndrome and aspirin was resumed for stroke in the setting of hypercoagulable states. His neurological assessment revealed significant improvement with a residual neurological deficit characterized by mild hemiparesis of the right upper extremity and no gait disturbances. He was eventually discharged from the hospital with outpatient follow-up.

Discussion: The present case report describes a patient diagnosed with ES who initially manifested with multiple strokes. The patient was treated with aspirin and warfarin as secondary stroke prevention, alongside glucocorticoid and IVIG for ES. While clinicians tend to focus on bleeding or infection-related complications in ES, thrombosis is a life-threatening complication of ES that may warrant further attention. The management of stroke in ES remains challenging with limited guidance on appropriate antithrombotic therapy in patients prone to both bleeding and thrombosis. In this case, anticoagulation was carefully initiated following stabilization of ES with glucocorticoid and IVIG therapy, as the patient had a high risk for brain hemorrhage. While anticoagulants are recommended for venous thromboembolism prophylaxis in AIHA, there are no clear guidelines for stroke prevention in ES. The findings underscore the importance of vigilance in stroke risk assessment, individualized treatment approaches, and the ongoing need for research to optimize management strategies in complex clinical scenarios.

Intrapleural Fibrinolytic Therapy for Loculated Malignant Pleural Effusion: Systematic Review and Meta-Analysis

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Background: Malignant pleural effusion (MPE) is a complication affecting up to 15% of cancer patients, with loculated effusions posing significant management challenges. While intrapleural fibrinolytic therapy (IFT) is effective for empyema, its role in treating loculated MPE remains unclear. Therefore, we aimed to report and compare the efficacy and safety of IFT for patients with loculated MPE. Methods: We searched MEDLINE and EMBASE to identify studies involving adult patients treated with IFT for loculated MPE. Inclusion criteria are adults (>18 years) with MPE treated with IFT, peer-reviewed articles such as randomized controlled trials (RCTs) with the comparison group of placebo or other medication, retrospective and prospective cohort studies, and case-control studies. We performed a meta-analysis to assess outcomes such as symptomatic improvement, complications, and hospital length of stay (LOS).

Results: Seven studies (n=1026) met inclusion criteria, comprising 582 patients who underwent IFT. The most frequent malignancy type was lung cancer (320 patients), followed by breast cancer (173 patients), ovarian cancer (14 patients), mesothelioma (10 patients), lymphoma (3 patients), and other malignancy types (159 patients). Among all types of intrapleural interventions, urokinase was used in 3 studies, tPA and DNase were used in 2 studies, and streptokinase was used in 2 studies. IFT showed unfavorable outcomes in symptomatic improvement as compared with the control group (OR = 5.25, 95% CI: 3.54–7.80, $p < 0.05$) with minimal heterogeneity ($I^2 = 0\%$). Complications (OR = 1.30, 95% CI: 0.43–3.93, $p = 0.65$), recurrence rates (OR = 0.57, 95% CI: 0.24–1.38, $p = 0.21$), and hospital length of stay (mean difference = 2.47, 95% CI: −7.14 to 12.07, $p = 0.61$) were not significantly different between groups. Hemorrhagic complications were rarely observed in IFT-treated patients.

Discussion: The present study represents the first systematic review and meta-analysis evaluating IFT specifically for loculated MPE. IFT might be associated with unfavorable clinical outcomes, including limited symptomatic improvement without meaningful reduction in complications or LOS compared with control or observation. Loculations in MPE are often driven by non-fibrin-mediated processes, such as malignant cell invasion or fibrotic scar formation, which may limit the effectiveness of fibrinolytic agents.

Conclusion: Given the questionable utility of IFTfor loculated MPE, future studies should focus on specific subpopulations and combination therapies to optimize management strategies. While alternative approaches, including IPC, should be prioritized over IFT to address MPE, individualized, multidisciplinary treatment strategies remain crucial for managing loculated pleural effusions or pleurodesis failure.

Impact of Insurance Status on Survival Outcomes in Cholangiocarcinoma Patients

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Introduction: Cholangiocarcinoma is a relatively rare cancer in the United States, with 8,000 cases diagnosed annually. In Hawaii, the incidence of biliary tract cancer from 1999 to 2008 was 1.5 to 2 times higher than the national average, with the cancer-associated mortality rates consistently 1.1 to 1.8 times higher [1]. The burden of cholangiocarcinoma in Hawaii disproportionately affects certain racial groups. Asian or Pacific Islanders, who constitute approximately 65-67% of the state's population, accounts for up to 86% of deaths associated with liver and intrahepatic bile duct cancers [1]. This study aims to evaluate the impact of socioeconomic status and race on overall survival among patients with cholangiocarcinoma.

Method: Data were collected for patients diagnosed with cholangiocarcinoma between 2000 and 2023 from Queen's Medical Center Oncology Data Registry. Participants were stratified by insurance status (Private insurance, Medicare, and Medicaid) and by racial groups (White, Asian, and Native Hawaiian or Pacific Islander [NHOPI]). Overall survival for each group was calculated using the Kaplan-Meier method. Cox proportional hazards regression models were created to assess predictors of survival, adjusting for clinical and pathological factors.

Results: A total of 429 patients were included in the final analysis. NHOPI patients were significantly younger at diagnosis compared to Whites and Asians ($p<0.001$). No significant differences in tumor characteristics were observed across racial groups. Racial differences by insurance included NHOPI more often having Medicaid insurance and Asians more often having private insurance ($p = 0.003$). Stage 4 cancers were associated with Medicaid, while unknown staging was more frequent among patients with Medicare insurance ($p = 0.021$). Gender, primary tumor site, and tumor grade were similar across insurance groups. No survival differences were observed among racial groups in both unadjusted and adjusted Cox regression models. Medicare status was associated with increased mortality in both unadjusted model (HR: 1.311, 95% CI: 1.051-1.635, p-value=0.016) and adjusted model (HR: 1.165, 95% CI: 0.915-1.484, p-value=0.018). Age, primary tumor site (intrahepatic and extrahepatic cholangiocarcinoma using gallbladder carcinoma as a baseline), grade, and stage were also significant prognostic factors.

Conclusion: No significant survival differences were observed among racial groups. Medicare status was associated with increased mortality in both adjusted and unadjusted models. A limitation of this study is the higher proportion of unknown cancer staging, which may have confounded the survival analysis. Further research should be performed to explore why Medicare status is associated with increased mortality in cholangiocarcinoma.

Reference1. Hawaii Department of Health. Hawaii Hepatitis B and Liver Cancer Mortality Report. Final report, January 31, 2023. Accessed [12/1/2024]. https://health.hawaii.gov/harmreduction/files/2023/02/Hawaii-Hep-B-and-Liver-Cancer-Mortality-Report-FINAL-1-31-2023.pdf.

Assessing the impact of resident oncology rotations: inpatient versus outpatient

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Introduction: The rising incidence of cancer has led to a growing demand for medical oncologists, particularly in underserved areas. Challenges such as limited fellowship opportunities, physician burnout, and insufficient early exposure to oncology during training contribute to the workforce shortage. Internal medicine residents are often introduced to oncology through mandatory rotations, but the structure and clinical settings of these rotations can influence their perceptions of the field. A study by McFarland et al. surveyed residents on their inpatient oncology rotation and found that a majority (80%) of residents experienced significant distress, with 20% experiencing posttraumatic stress disorder (PTSD) distress levels. The primary objective of this study is to compare the impact of resident experiences in inpatient versus outpatient hematology/oncology settings on their comfort in caring for cancer patients and on level of distress.

Methods: A prospective, cross-sectional study was conducted among second and third-year residents at the University of Hawaii Internal Medicine Residency Program (UHIMRP) during a 4-week hematology/oncology rotation. Each rotation consisted of two weeks of inpatient consultations and two weeks of outpatient clinic exposure. Participants completed pre-rotation, mid-rotation, and post-rotation surveys, which collected demographic information, perceptions of oncology, and psychological impact assessments using the Impact of Events Scale-Revised (IES-R). Data collection occurred between November 1, 2023, and November 30, 2024, using Google Forms. Surveys were anonymized to protect participant confidentiality.

Results: Twenty-one residents completed questionnaires. Residents were significantly more comfortable taking care of cancer patients after the rotation ($p=0.0019$). There were no significant differences in residents' comfort in caring for cancer patients between their inpatient weeks versus their outpatient weeks. There was also no significant change in participants' consideration to pursue oncology at the end of the rotation. Twenty percent of residents (4 of 20) experienced significant clinical distress (IES-R ≥8) at some point during their rotation, however none experienced PTSD levels of distress (IES-R ≥33). Comparing participants' inpatient and outpatient experiences, there was no difference in the incidence of clinical distress (3 out of 20 participants and 2 out of 20 participants respectively).

Conclusion: This study showed a trend of favorable change in scores comparing pre-rotation and post-rotation, implying a positive impact of the rotation. In particular, residents' comfort in caring for cancer patients improved to a statistically significant degree. We also found that a minority of residents experienced significant clinical distress during their medical oncology rotation, without a significant difference in their inpatient or outpatient experiences. Our findings did not align with those of McFarland et al. This discrepancy may be due to the structure and/or duration of curriculum. Furthermore, the study by McFarland et al. included a cohort with 59% interns, whereas our study involved no interns. This is an ongoing study, and the current findings represent preliminary data.

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Thrombotic Thrombocytopenic Purpura Masquerading as Stroke: Diagnostic Challenges in the Absence of Schistocytes

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Background: Thrombotic thrombocytopenic purpura (TTP) is a life-threatening condition characterized by autoantibody-mediated inhibition of ADAMTS13, an enzyme essential for cleaving von Willebrand factor multimers. The resulting microvascular thrombosis leads to hemolytic anemia, thrombocytopenia, and end-organ damage. Although the classic pentad includes microangiopathic hemolytic anemia with schistocytes, thrombocytopenia, renal impairment, fever, and neurologic symptoms, the complete presentation occurs in fewer than 5% of cases. Neurologic deficits occur in up to 90% of cases and are often mistaken for stroke, particularly in the absence of schistocytes. Studies suggest a misdiagnosis rate of approximately 30% in the early stages of the disease. Without treatment, TTP carries a mortality rate exceeding 90%, but early recognition and appropriate treatment can reduce the mortality to 10–20%. This report highlights the diagnostic challenges in a patient presenting with neurologic symptoms, hemolytic anemia, and thrombocytopenia in the absence of schistocytes.

Case Presentation: A 70-year-old woman with no significant medical history presented with acute-onset of impaired word-finding ability and right-sided facial and upper extremity numbness. Five days prior, she experienced fatigue, headache, and bruising on her lower extremities. On admission, her vital signs were stable and no fever. Physical examination revealed mild aphasia with preserved strength and sensation, purpuric ecchymosis on the right knee, and a National Institutes of Health Stroke Scale (NIHSS) score of 1. Initial laboratory findings demonstrated hemoglobin 7.8 g/dL, platelet count 35 × 10^9/L, lactate dehydrogenase (LDH) 875 U/L, total bilirubin 2.4 mg/dL, undetectable haptoglobin, and normal coagulation studies. Peripheral smear showed no schistocytes. Stroke was initially suspected; however, brain MRI and MRA revealed no evidence of infarction. A PLASMIC score of 5 indicated a high probability of TTP. No underlying conditions associated with TTP, such as autoimmune disease, infection, or malignancy, were identified. Within five hours of admission, plasma exchange and corticosteroid therapy at 1 mg/kg/day were initiated. Confirmatory ADAMTS13 activity testing, reported at <1% one week later, confirmed the diagnosis. The patient completed five cycles of plasma exchange during her hospitalization. By discharge, her platelet count had normalized to 336 × 10^9/L, and her neurologic examination returned to baseline.

Discussion: This case emphasizes the importance of maintaining a high index of suspicion for TTP in patients presenting with neurologic deficits, hemolytic anemia, and thrombocytopenia, particularly when brain imaging is normal and schistocytes are absent. Although schistocytes are a hallmark of TTP, their absence should not exclude the diagnosis, as they may be absent in the early disease course. The PLASMIC score serves as a valuable tool to stratify the likelihood of TTP and guide timely management. Immediate initiation of plasma exchange and corticosteroid therapy is critical to reduce mortality while awaiting ADAMTS13 activity results.

Conclusion: TTP should be included in the differential diagnosis of patients with suspected stroke who present with hemolytic anemia and thrombocytopenia, even in the absence of schistocytes. Early recognition and initiation of appropriate therapy, including plasmapheresis and immunosuppressive treatment, are critical for improving patient outcomes and reducing mortality.

PATIENT CHARACTERISTICS AND ATRIAL ARRHYTHMIA IN PULMONARY HYPERTENSION: A SYSTEMATIC REVIEW AND META- ANALYSIS

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Background:

Atrial arrhythmias are common in patients with pulmonary hypertension (PH) and confer a higher morbidity and mortality. Factors contributing to arrhythmia development have not been well established. This study conducts a systematic review and meta-analysisevaluating PH patient characteristics and the presence of atrial arrhythmias.

Methods:

Databases, including PubMed and Embase, were searched from inception to September 2024. We included published prospective orretrospective observational studies comparing PH patients with and without atrial arrhythmias. Data was combined using a random-effects

Results:

Eight studies from 2012 to 2022 involving 2,168 patients were included. Regarding patient characteristics, patients with atrialarrhythmias had older age (WMD= 5.7 years; 95%CI: 0.2, 11.2), more prevalence of WHO functional class III and IV (OR= 1.8; 95%CI: 1.2, 2.6), diabetes (OR= 2.3; 95%CI: 1.1, 4.7). Regarding echocardiogram and hemodynamic parameters, patients with atrial arrhythmia demonstrated larger right atrial area (WMD= 5.6 cm2; 95%CI: 2.8, 8.3), higher right atrial pressure (WMD= 3.2 mmHg; 95%CI: 1.8, 4.6) and higher pulmonary wedge pressure (WMD= 2.5 mmHg; 95%CI: 0.2, 4.7). There is no significant difference in mean pulmonary arterial pressure and pulmonary vascular resistance.

Conclusion:

This meta-analysis strengthens the reliability of the identified characteristics associated with a higher risk of developing atrialarrhythmias in PH patients.

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https://imig.uhmed.org

About Us

IMIG is a student-run interest group at the John A. Burns School of Medicine (JABSOM). We're dedicated to providing information about careers in internal medicine, fostering communication between students and physicians, and connecting with the community to promote health awareness.

Fall 2023 - Spring 2024 Events

- Subspecialty Mixer
- JABSOM IM Resident Panel
- ACP Pau Hana
- UHIMRP Primary Care Forum
- Farrington High School Capstone Project Mentorship
- Amyloidosis Bureau Patient Speaker
- Journal Club
- Check Your Pressure x IMIG: Blood Pressure Clinic
- Papakolea Health Fair (3/2/24)
- Lifestyle Medicine Speaker (3/13/24)

Opportunities for Physicians to Get Involved

- IM Clinical Specialties Experience
  - This program allows medical students to shadow physicians during their relevant preclinical units (e.g. shadow a cardiologist during MD2 [cardiac] unit)
  - Students typically join a specialist for one half-day (times and dates up to the physician's availability)
- Physician Mentorship Program
  - This mentorship program connects interested medical students with community physicians in IM and its subspecialties.
  - May entail shadowing, mentorship, and/or research opportunities
  - Expectations: have at least 2 one-on-one meetings per academic year. Time commitment is dependent on mentor's and mentee's preferences. Complete mid-year and end-year feedback surveys.

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INTERNAL MEDICINE STAFF & LOCUM OPPORTUNITIES

- Internal Medicine (Big Island, Maui, Oahu)
- 2026-2027 Chief Resident (Oahu)

INTERNAL MEDICINE SUBSPECIALTY STAFF & LOCUM OPPORTUNITIES

- Dermatology (Maui, Oahu)
- Hematology & Oncology (Oahu)
- Nephrology (Oahu)

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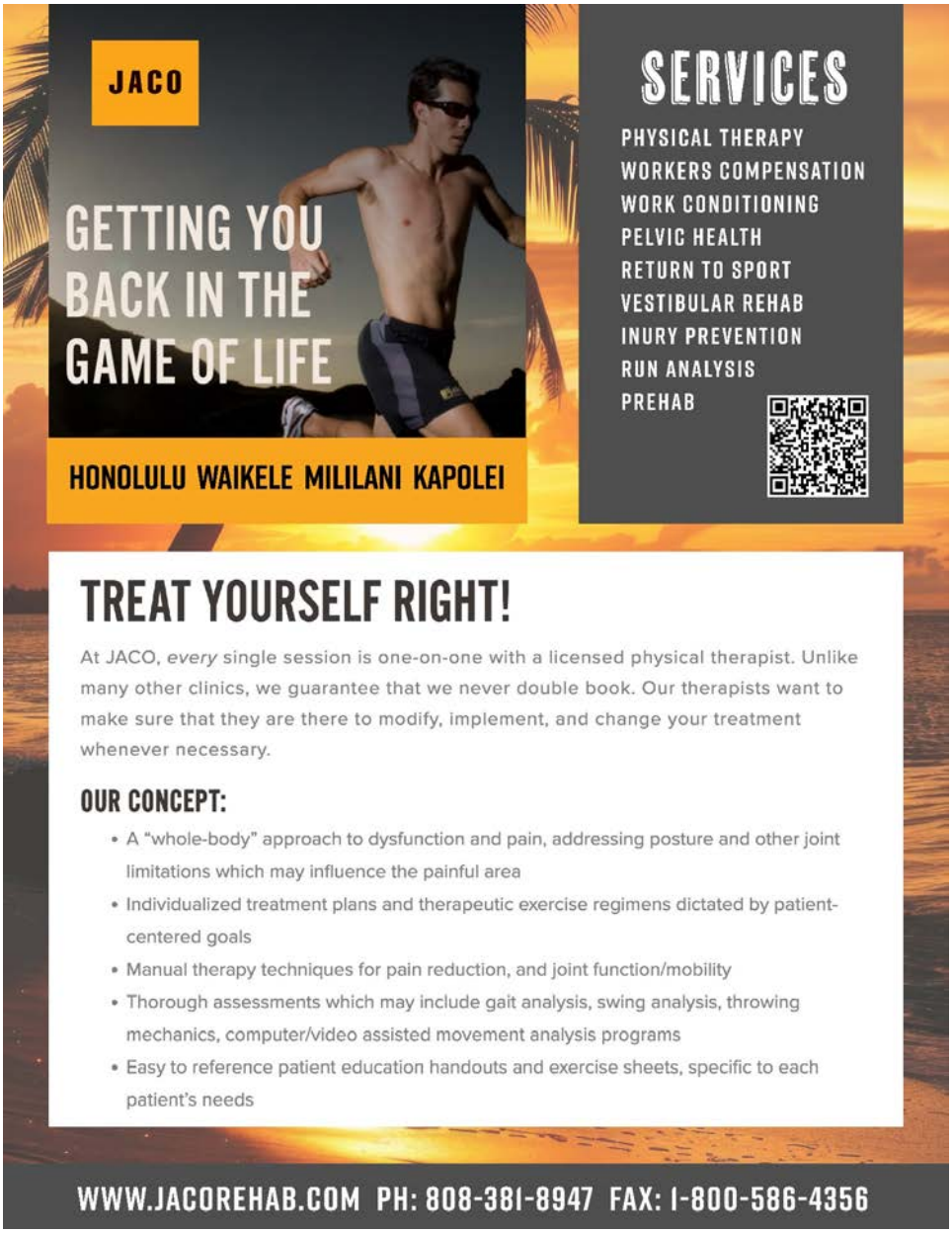
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About Us

The VA Pacific Islands Healthcare System is one of the leading health care systems serving Veterans in the Sierra Pacific VA Health Care Network (VISN 21). We provide services for an estimated 50,000 Veterans at 12 locations throughout Hawaii and other Pacific islands, including Guam and American Samoa. Spark M. Matsunaga VA Medical Center, located in Honolulu, is a teaching hospital that provides a full range of services, with state-of-the-art technology as well as education and research.

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Send Cover Letter and CV to:

Rachel Reliford, Physician Recruiter
leslie.reliford@va.gov

VA | U.S. Department of Veterans Affairs

www.vacareers.va.gov

Opportunities are available in primary care, mental health, geriatrics and several specialty areas

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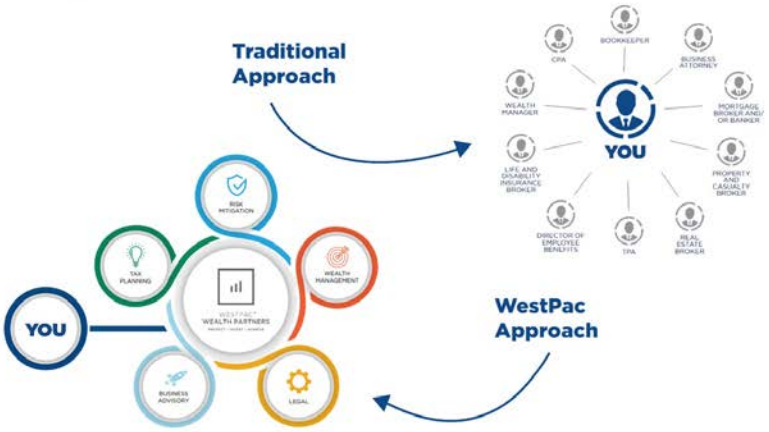

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