American College of Physicians- Minnesota Chapter Annual Abstract Competition

Poster Session

November 1, 2024

Abstracts Submitted for Competition

Medical Students	
Research - Medical Students	
Elena Cattaneo Dr. Ariella Bar-Gil Shitrit Dr. Eugenia Shmidt Dr. Sunanda Kane	*Outcomes of Multiple Gestation Pregnancies in Inflammatory Bowel Disease*

gastrointestinal bleeding due to diffuse angiodysplasia was hospitalized with chest pain and acute-on-chronic anemia with a hemoglobin of 6.2 g/dL. He was diagnosed with non-ST-elevation MI in the setting of serial increasing troponin T elevations of 168, 224, and peak 353 ng/L (normal <15 ng/L) and new T-wave inversions in the lateral leads on his electrocardiogram. His echocardiogram showed a left ventricular ejection fraction of 54% with anterior left ventricular regional wall motion abnormalities. MI etiology was thought possibly secondary to oxygen supply/demand mismatch and his symptoms improved after transfusion of 3 units of packed red blood cells. However, type 1 MI could not be definitively ruled out. Prior to invasive coronary angiography, he underwent colonoscopy, which showed angiodysplasias that were treated with argon beam coagulation and clipping. Afterwards, given that these lesions can be diffuse, he was challenged with dual antiplatelet therapy (DAPT) and maintained a stable hemoglobin. Subsequent coronary angiography revealed significant coronary artery disease with a focal LAD aneurysm amenable to percutaneous coronary intervention (PCI). Due to the concern of occult bleeding, he was continued on the DAPT challenge and scheduled for outpatient PCI. However, his hemoglobin decreased from 9.8 to 6.6 g/dL over the course of 1 week prompting cessation of clopidogrel. He had

pregnancy. Following termination of pregnancy, fluconazole and flucytosine, which could not be used during pregnancy, were added to amphotericin B. Anti-fungal agents were then consolidated to itraconazole based on minimum inhibitory concentration data, and she was ultimately discharged on itraconazole. Throughout this hospitalization, serial lumbar punctures were performed for management of elevated intracranial pressure due to

Finalist

dissections, despite no clear association with recurrence or progression of dissection.

Case Presentation: A 41-year-old male with a history of hypertension (managed with a beta-blocker and calcium channel blocker), coronary artery disease, and class III obesity presented to the emergency department with sharp, non-radiating substernal chest pain, 2/6 diastolic murmur best heard at the right upper sternal border, and new T-wave inversions on baseline electrocardiogram. Initial and repeat troponin levels were 8 and 8, respectively. Imaging revealed an acute thoracic aortic dissection extending from the sinotubular ridge to the bilateral iliac arteries, involving the left kidney, mesentery, and lower extremities. He required replacement of the ascending aorta and hemiarch, along with right lower extremity fasciotomy. Post-operative transthoracic echocardiogram revealed an ejection fraction of 52% with mild aortic regurgitation, and CT imaging demonstrated residual dissection of the descending thoracic aorta.

After discharge, he was referred to cardiac rehabilitation, enrolling 36 days following surgery. His rehabilitation program included three 35-minute in-person sessions and three additional home sessions, totaling six active days per week. During rehabilitation, he reported perceived exertion levels of 10-14 (Borg scale 6-20), achieved peak exertion of 4.7 METs, and had a maximum exercise heart rate of 142 bpm (79.2% predicted) and blood pressure of 142/70 mmHg. He completed 32 sessions and reported only mild symptoms, specifically intermittent aches in his right lower extremity both at rest a

	hypotonic (<275), the next best step to identify the underlying etiology is a thorough history and physical exam to assess volume status. Case Presentation: A 78-year-old male presented to the ED after outpatient labs demonstrated hyponatremia and acute kidney injury on top of pre-existing chronic kidney disease. Pertinent medical comorbidities included heart failure with mid-range ejection fraction of 46% on torsemide, spironolactone, and carvedilol, persistent atrial fibrillation on amiodarone, and hypothyroidism. He was seen in clinic the day before for hypotension (88/49) with lightheadedness on standing. He described a month of progressive generalized weakness, decreased oral intake, and less frequent urination, but no change in mental status. He shared he had stopped taking his levothyroxine a few weeks prior. Admission weight was 3kg below his reported dry weight and diagnostics including ECG were unchanged from prior. In addition to electrolyte abnormalities, labs revealed a Sosm of 311mOsm/kg. BUN was 131mg/dL and urine osmolarity was 313mOsm/kg. TSH was elevated though downtrending at 72.1mIU/L, but T4 was within normal limits. On admission, levothyroxine was restarted. His guideline-directed medical therapy was put on hold while he recovered from the AKI. He responded well to initial management with fluid resuscitation including 50mL of 3% saline and 1L normal saline. He received a short course of sodium chloride tablets while encouraging PO intake and advancing nutrition. Blood pressure and heart rate remained stable. He was asymptomatic and euvolemic for the remainder of the hospitalization. Electrolytes and renal function slowly trended towards normal and he was discharged to a skilled nursing facility for continued rehabilitation 4 days after admission. Discussion: In patients presenting with both azotemia and hyponatremia, high urea in the serum masks the expected drop in osmolality seen in true (hypotonic) hyponatremia. Since urea is an ineffective osmole, Sosm must be corrected to account for azotemia. ! ŦúŜℕ ŎƧℕℕŜŎúΛƧyΣ úKΛă LJI·úΛŜyúΩă ăŜℕdzY was indeed hypotonic (311-131/2.8=264). Determining the volume status using history and physical exam revealed a month of decreased intake/ output and orthostatic symptoms on diuretic therapy. High urine osmolality in the absence of weight gain, JVP elevation, or edema was consistent with a hypovolemic state. The mainstay of treatment is volume resuscitation. Interestingly, in the treatment of hyponatremic patients with azotemia, azotemia has been found to be protective against osmotic demyelination syndrome (ODS) and dialyzing can actually re-introduce the risk of ODS.

Christopher Kraemer
Dr. Mithun Suresh
Hamza Hai

	accurate translation that conveyed the same message as the original document, except for some minor alterations in wording. For example, the ƻǊʎƎʎƴƏ·ƒ ǊŜăŜl·ǊŎK ŘƻŎdzƳŜƴűă dzăŜŘ űKŜ ǿƻǊŘ ά∃ʎØŜέ ǿKʎƒŜ /Kl·űDtȼ dzăŜŘ άƻōűl·ʎƴɸέ Conclusion: Minnesota has the largest Somali population in the United States, with a large subset of this population being non-English speaking. The development of validated language tools is urgently needed to ensure that non-English speaking individuals have resources they need to participate in clinical trials.
Transitional Medical Graduates	
Research - Transitional Medical Graduates	

Parul Berry
Dr. Kanika Sehgal
Dr. Raseen Tariq
Dr. Darrell Pardi
Dr. Sahil Khanna

	Patients receiving BEZ with SOC had a higher resolution rate (83.3%, 95% CI 75.5-91.1%) compared to those receiving SOC alone (70.8%, 95% CI 62.7-78.8%). Conclusion: Bezlotoxumab is effective in reducing the recurrence of CDI in real-world settings, with resolution rates comparable to those reported in clinical trials. The meta-analysis supports the use of BEZ in conjunction with SOC antibiotics, but further prospective studies are needed to better understand its role in specific patient populations and its long-term effectiveness.
Clinical Vignette - Transitional Medical Graduates	

Mohamed Eldesouki
Dr. Hazem Abosheaishaa

rare complication in their differentials to be able to identify these

cholestyramine, ursodiol, and vitamin E to enhance PPIX excretion with frequency and dosage adjustments as needed. Her symptoms have fluctuated since and have been reflective of her FEP levels.

Discussion: Acute liver failure is a rare but life-threatening complication of XLP. This case highlights the importance of early recognition of protoporphyric hepatopathy in XLP patients, especially those with late-onset presentations. The treatment approach for XLP-related liver failure is not standardized, but thi

approximately 6-month intervals after AIAC implementation. Colonoscopies performed for screening, surveillance, or positive fecal immunochemical test indications were included. Secondary endpoints included sessile serrated lesion (SSL), hyperplastic polyp, and benign, non-adenomatous, non-hyperplastic (BNANH) lesion (e.g. lymphoid aggregate, normal mucosa) ŘŜűŜŎűƛƻƴ ͘ Iŷ ̞ {ŧĂƚƛƐƚŝĐĂů ĂŶĂůLJƐŝƐ ǁĂƐ ƉĞƌĨŽƌŵĞĚ ƵƐŝŶŐ ŚŝͲ-square or ANOVA Type III F-test, as applicable.

Results: We evaluated 295 AIAC colonoscopies in the first 6-month interval (May-October 2023) and 419 AIAC colonoscopies in the second 5-month interval (November 2023-March 2024). Groups were balanced without differences in patient demographics (age, gender, body mass index), endoscopists involved, or polyps per colonoscopy. ADR did not improve

	regarding the interaction between PCKD and ST-Elevation Myocardial Infarction (STEMI) remains limited. Methods: This study analyzed hospital admissions for STEMI using data from the 2016-2020 Nationwide Readmissions Database. Patients with and without PCKD were compared in terms of in-hospital outcomes. The primary outcome was 30-day readmission for any cause, while secondary outcomes included the average length of hospital stay (LOS) and total hospitalization costs (THC). Multivariable regression models were applied to adjust for potential confounding factors. Results: Out of 182,308 STEMI admissions, 204 patients (0.1%) had a concurrent diagnosis of PCKD. When compared to patients without PCKD, those with PCKD had higher odds of 30-day readmissions (adjusted odds ratio [aOR] 1.2, 95% confidence interval [CI] 1.04-1.4). Furthermore, PCKD patients had a longer hospital stay (mean LOS 5.9 days vs. 4.6 days, $p<0.001$) and incurred higher hospitalization costs ($153,497 vs. $135,888, $p<0.001$). Conclusion: Patients with PCKD who were hospitalized for STEMI exhibited higher rates of 30-day readmissions, extended hospital stays, and greater healthcare costs compared to those without PCKD. These findings underscore the need for further research to confirm these observations and to explore strategies that could improve outcomes in this high-risk population.
Jackie Blomker	*Rates and Characteristics of Post-polypectomy Interval Colorectal Cancer: A Single-Center Retrospective Cohort Study* Introduction: Post-colonoscopy colorectal cancer (PCCRC) can occur due to missed polyps or incomplete polyp resection on initial colonoscopy. High incidence of PCCRC in the proximal colon is thought to be secondary to missed lesions and therefore a second look in the right side of colon is recommended. Polyps in the rectum are thought to be less likely to be missed due to less surface area of the rectum. Thus, we hypothesized that PCCRC in the rectum is more likely to occur due to incomplete polyp resection. We aimed to assess the risk and characteristics of post-polypectomy colorectal cancer. Methods: We included all patients with colorectal cancer (CRC) who underwent a colonoscopy within 5 years prior to diagnosis of CRC at our institution from 2004-2023. PCCRC was defined as CRC (colorectal cancer) within 5 years of a colonoscopy. Patients who had CRC on initial colonoscopy or those with history of inflammatory bowel disease and familial polyposis syndromes were excluded from the analysis. Post-polypectomy colorectal cancer (PPCRC) was defined as CRC at the exact site of previous polypectomy within 5 years of a colonoscopy. Site of the previous polypectomy was confirmed by reviewing endoscopic images. Demographic, clinical, and adenoma characteristics as well as endoscopy details were analyzed and extracted. Our primary outcome was the rate of PPCRC. The secondary outcome was proportion of PPCRC stratified by location. Results: Out of 414 cases of CRC diagnosed in the study period, 57 were

PCCRC (43 with colon cancer and 14 with rectal cancer). 36 out of 57 had PPCRC (63.1%), with 80% (29/36) being colon cancer and 19.4% (7/36) rectal cancer. Table 1 shows demographics, colonoscopy, and pathology details of PPCRC. There was no difference in rates of PCCRC based on location (rectum 11.6% vs colon 13.7%, p=0.45). There was also no difference in proportion of PPCRC as stratified by location (rectum 50% (7/14) vs colon 67.4% (29/43), p:0.245). 23 out of 36 cases of PPCRC were at site of a prior advanced adenoma, with 82.6% (19/23) in the colon and 17.4% (4/23) in the rectum.

Discussion: Our study highlights that the majority of interval PCCRCs occur at a site of previous polypectomy. In addition, there was no difference in proportions of PPCRC when stratified by location of cancer. These findings reinforce the need for quality metrics focusing on polypectomy technique and careful inspection of polypectomy sites to assess for any residual polypoid tissue.

Tracy Bui
Michelle Lee
Nathan Smith
Adam Everson
Eugenia Raichlin
Takushi Kohmoto
Lyle Joyce
David Joyce
Matt Cooper
Stephanie Zanowski
Jenessa Price

Racial Disparities in Access to Heart Transplant Among Advanced Heart Failure Patients Evaluated for Advanced Therapies

Purpose: Evaluation of advanced heart failure patients for Mechanical Circulatory Support (MCS) and/or Heart Transplantation (HT) requires a multi-disciplinary approach. We examined whether race is independently Ɩ·ăǎƵǑƛƖ·ǘŜŘ ǿƛǘK ǘKŜ a5¢ ǑƵϒϒƛǘǘŜŜǚă ŘŜǑƛăƛƵƴŦƵŊ ŘdzŊƖ·ble left ventricular assist device (LVAD) and HT above and beyond clinical variables.

Kari Falaas
Dr. Michael Schnaus
Dr. Margaret Singer
Dr. Allison Hochstetler
Pang Nhia Khang
Katherine Schmiechen
Dr. Elie Gertner

CASE SERIES: Devastating Morbidity and Mortality Rates in the Hmong Population with a Diagnosis of Gout who had a COVID-19 Infection

Background: Hyperuricemia is associated with an elevated risk of developing cardiovascular diseases, diabetes, chronic kidney disease, and metabolic syndromes. The Hmong population, in particular, has a higher predisposition to hyperuricemia/gout and associated comorbid conditions. More recently, studies have also shown that all individuals with gout have higher risk of morbidity and mortality with COVID-19 infection. We examined outcomes of COVID-19 infection in the Hmong population with gout to determine whether these mortality and morbidity risks were compounded and of even greater import in this population.

Methods: Through retrospective chart review, 21 Hmong patients with COVID 19 and a clinical diagnosis of gout were identified. These patients ǿŜ𝕎Ŝ Ɩ·ﬀ ӂ мy èŜƖ·𝕎ă ƻfŘΣ KƖ·Ř ŘƻǑǳϒŜyǘŜŘ /h±Ⅼ5-19 infection, required oxygen, and presented to two tertiary care centers between March 1, 2020-December 31, 2021. Descriptive statistics were used for analysis.

Results: The average age of the 21 patients with severe COVID-19 identifying as Hmong and with a comorbidity of gout was 62.9 years . Fourteen (63.6%) of these patients identified as male, with an average BMI of 28.9. The average maximum uric acid level prior to admission was 8.02. Six had a history of tophaceous gout, 3 had a history of uric acid nephrolithiasis, and 14 were being treated with allopurinol prior to admission. Other underlying comorbidities for this cohort included chronic lung disease, chronic heart failure, renal disease, and diabetes.

The average length of stay was 12.1 days. Seven patients required low flow oxygen via nasal cannula, 3 patients required high flow oxygen, 1 patient required noninvasive ventilation, and 10 of the patients (48%) required mechanical ventilation. The average number of ventilator days was 15.5 days. Seventeen of the patients received steroids, 6 received remdesivir, and 1 received tocilizumab. Eleven of the twenty-one patients ultimately transitioned to comfort care. The 30c COVID

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Dr. Lorraine Mascarenhas
Dr. Sue Duval
Dr. David Benditt

Quantitative Testing Reveals Severity of Autonomic Dysfunction after Acute COVID-19 Infection: A Comparison with Controls and Autonomic Failure

Background: COVID-19 infections have been associated with cardiovascular autonomic dysfunction (AD). Clinical findings include fatigue, cognitive impairment, and postural intolerance. However, quantitative post-COVID AD assessments are lacking.

Objective: Compare autonomic testing measures of post-COVID-19 subjects to controls and those with pure autonomic failure (PAF).

Methods: Autonomic testing included 1) change in heart rate (HR) and blood pressure (BP) with active standing (AS) and tilt table testing (TT), 2) time to BP nadir and recovery during AS and TT, 3) Valsalva ratio (VR), and 4) respiratory sinus arrhythmia (RSA). Comparisons between two groups were made using t-tests, Kruskal-Wallis, or chi-square tests. Multivariable linear regression was used to adjust findings for age and sex. A p-value of <0.05 was considered significant.

Results: Control subjects (n=25, median 32 [21-39] years, 76% female) and post-COVID patients (n=91, median 36 [25-50] years, 84% female, mean 11.96 [±9.14] months from infection) were similar in age and sex, while the PAF group (n=38, median 64 [56-

with >1 month follow-

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rapid development of a pleural effusion involving over 90% of the hemithorax over a 24-hour period. This causes compression of the lungs and mediastinal shift, which can rapidly lead to hemodynamic collapse and death if not promptly treated.

Case Presentation: A 37-year-old male with no pertinent cardiopulmonary history presented to the ED with shortness of breath and left shoulder pain which was exacerbated with deep breathing. Initial vitals were notable for tachycardia to 115 and SpO2 at 93%. A familial history of blood clots was noted, and a CT PE showed patchy lingular infiltrate without pleural effusion or pulmonary embolism. He was able to ambulate on room air and was discharged with oral antibiotics. The following day, he presented again to the ED with worsening shortness of breath. Chest X-ray was notable for left basilar opacity, concerning for pneumonia versus edema. He was tachypneic and hypo 171.65 112.(t)16(h)-19(e)-2(lu)28(n)-19(g)16(s)-17(a)23(n)-19(d)-1

Finalist

Introduction: Pyogenic liver abscesses are associated with significant morbidity and mortality, most commonly due to complications such as sepsis and/or septic shock. Liver abscesses usually develop via four main routes: hematogenous seeding (bacteremia), direct spread from ascending biliary infection, extension from intra-abdominal infection, or abdominal trauma.

Case Description: We describe a case of a polymicrobial hepatic abscess in a 47-year-old female with a history of Roux-en-Y reconstruction, common bile duct resection, and hepaticoduodenostomy for a suspected type 1 choledochal cyst. These procedures were performed 5 years prior to her presentation. The patient also had a clinical diagnosis of familial adenomatous polyposis (FAP) and had undergone total colectomy and total abdominal hysterectomy in 2006. She reported first-degree relatives apparently affected with FAP, but no APC gene testing had been performed on her. She initially presented to the emergency department with left upper quadrant abdominal pain and nausea. Initial investigations revealed elevated leukocytes (18.2 x10^9 /L), but no acute CT abnormalities, and she was discharged. Persistent leukocytosis (22.8 x10^9 /L) was noted on follow-up with her primary care provider. Four weeks later, she returned to the emergency department with worsening of her initial symptoms, increasing leukocytosis (36.7 x10^9 /L), and a CT scan revealing a 10 cm gas-containing abscess in the left hepatic lobe, with pneumobilia. Treatment included empiric antibiotics and percutaneous drainage of the abscess. Cultures from the abscess grew Streptococcus anginosus and Escherichia coli, but peripheral blood cultures were negative. A repeat CT 3 weeks after treatment showed resolution of the abscess.

Discussion: Streptococcus anginosus and Escherichia coli are part of the normal gut flora but have the potential to cause liver abscesses. The patient had no history of trauma or recent gastrointestinal procedures, nor evidence of bacteremia or active infection in the biliary tree. It is likely that her altered gastrointestinal (GI) anatomy, due to her hepaticoduodenostomy 5 years prior, facilitated direct translocation of gut flora to the liver, resulting in an abscess. Liver abscesses are rare in immunocompetent patients without active bacteremia or bilia17(c)13(a)24(u)

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Fatima Kaleem Ahmed
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Non-Vitamin K Antagonist Oral Anticoagulants for Patients with Hypertrophic Cardiomyopthay and Atrial Fibrilliation: A Systematic Review and Meta-Analysis

Background: Hypertrophic cardiomyopathy (HCM) is a hereditary cardiovascular disorder, often complicated by atrial fibrillation (AF). The

	addition to hypo-enhancement of the superior mesenteric vein and left portal vein, indicating non-occlusive thrombosis of the superior mesenteric vein and occlusive thrombosis of the left portal vein. Consequently, a heparin drip was initiated. Doppler US demonstrated patency of the portal venous system but was suspicious of intrahepatic biliary dilatation. Gastroenterology was consulted, recommended discontinuing the heparin drip and obtaining an MRCP, which ruled out biliary dilatation but revealed hyperintensity in the anterior left lobe of the liver, suggestive of acute hepatitis. MRI abdomen with venous phase confirmed the initial concerns for superior mesenteric vein thrombosis and intrahepatic peripheral portal vein thrombosis. Surgical consultation thought the appendiceal dilatation was likely due to reactive ischemia or vascular congestion from the clots rather than inflammation, with no initial surgical intervention. He was restarted on a heparin drip. An extensive workup was negative for viral, metabolic, and autoimmune etiologies for hepatitis. However, hypercoagulable workup revealed a positive lupus anticoagulant (LA), the rest were negative. On day 5 of hospitalization, he developed acute localized RUQ pain, with interval changes in his abdominal examination. Additionally, his white blood cell count trended to 16k/cmm. Given concerns for progression of appendicitis, a repeat CT scan demonstrated uncomplicated acute appendicitis. The decision was made to proceed with surgery, which ultimately revealed an appendiceal rupture. Appendectomy and liver biopsy were performed during the same procedure. Postoperatively, his symptoms resolved, and he was discharged on oral anticoagulants. Biopsy results were negative for malignancy or infiltrative disease. He followed up with He had outpatient follow ups. LFTs normalized, and LA 3-months later was negative. Follow-up CT scan at 6-months showed resolution of the thromboses. He completed a 6-month course of anticoagulation. The etiology of the thrombosis was thought to be a complication of severe appendiceal inflammation. Conclusion: In cases of acute appendicitis complicated by liver dysfunction and blood vessel thrombosis, prompt and effective management of the source of inflammation is essential to avoid life-threatening complications.

Alexandra Allman
Dr. Joe Orndorff

to subsequent surgery. We aim to conduct a systematic review and meta-analysis to determine the outcomes of interval cholecystectomy in patients with previous EUS-GBD.

Case Presentation: We conducted a literature search of multiple electronic databases (inception-June 2024) for studies evaluating outcomes of interval cholecystectomy following EUS-GBD. Primary outcomes were pooled proportion of patients undergoing cholecystectomy, conversion rate of laparoscopic-to-open cholecystectomy, rates of open cholecystectomy and rate of adverse events (AEs). Secondary outcomes were procedural time, length of stay (LOS), and mortality. A meta-analysis of proportion was performed using the random-effects model. I^2 statistic was used to assess heterogeneity.

Out of 1001 citations, 16 studies including 716 patients (51.8% male, mean age 71.7±14.8, mean Charlson Comorbidity Index 5.93±3.5) who had previously undergone EUS-GBD [stent site: duodenum 47.5%; stomach 27.7%; jejunum 0.7%] were analyzed. Pooled proportion of successful interval cholecystectomy was 0.37 (CI: 0.16-0.57; I2 99%) [laparoscopic: 0.74 43.3 re0 gx 5.16

nodules/mass lesions involving both cerebral hemispheres, largest in the left cerebral hemisphere with significant surrounding vasogenic edema. After

additional TPN without improvement and unfortunately passed due to

given no improvement in transaminases, therapy was discontinued. Throughout the several months his evaluation took place, AST/ALT remained persistently elevated, ranging from ~300 to 1300. Approximately seven months after the initial elevation, the patient [illegible] but did not fully normalize following the cessation of his initial chemotherapy and anti-hormone therapy.

Discussion: Cases of elevated LFTs observed in metastatic prostate cancer most often indicate liver injury and dysfunction. This case presents a unique instance of elevated AST/ALT levels without any signs of liver injury, inflammation, or dysfunction - in the context of an extensive, negative evaluation. The etiology of these elevations remains unclear; however, we hypothesize an as-yet unspecified paraneoplastic process may ac7(en)7[(-)] TJ

Dr. David Phelan

Case Presentation: A 66-year-ƶfŘ ǿƶϒl·ƴ ǿλǘK l· Kλǎǘƶǌè ƶŦ /ǌƶKƴΩǎ ŘλǎŜl·ǎŜΣ previously stable on infliximab, presented to urgent care with multiple episodes of non-bloody diarrhea and fever. Vitals were notable for a blood pressure of 151/81, heart rate of 123, and temperature of 102.5F. Laboratory testing revealed negative respiratory viral panel, negative GI pathogen panel, normal lactate (0.9 mmol/L), elevated CRP (37.4 mg/L), and elevated fecal calprotectin (121 mcg/g). She was prescribed levofloxacin and instructed to defer her upcoming infliximab infusion in the setting of ǎdzǎLJŜŎǘŜŘ λƴŦŜŎǘλƶƴ ǾŜǌǎdzǎ l· /ǌƶKƴΩǎ ŘλǎŜl·ǎŜ Ŧſl·ǌŜϕ Cƶſſƶǿλƴƺ KŜǌ ǌŜſŜl·ǎŜ from urgent care, the patient was informed that her blood culture was positive for Listeria monocytogenes in one of two bottles at twenty-one hours, and she presented for hospitalization.

The patient recalled that a few days prior to the onset of her symptoms, she had consumed a few bites of turkey deli meat before disposing of it. On admission, she was neurointact but reported recent onset of headaches and memory issues, in addition to gastrointestinal distress and malaise. As this was concerning for potential CNS infection, she was initiated on both ampicillin and gentamicin. Her physical exam was positive only for

	(typically left ventricular hypertrophy but can also cause scarring as in this case), aortic aneurysms, valvular disease, and coronary artery disease, and should be considered when etiology of cardiac disease is unknown, especially when infiltrative disease is suspected.
Margaret Crosby Dr. Anna Cox Dr. Peter Hannon Dr. David Flemig Dr. Charles Reznikoff	*The Role of Addiction Medicine Collaboration During Cancer Treatment in Patients with Head and Neck Cancer: A Case Report* Introduction: Patients with head and neck cancer (HNC) have higher rates of severe cancer pain and many continue to experience pain for years following the completion of cancer treatment. This, combined with higher rates of tobacco use, alcohol use, existing opioid use and other substance use disorders among HNC patients, increases the risk of long-term opioid therapy (LTOT) and opioid use disorder (OUD). As cancer survival rates improve, this clinical situation is increasingly common and there is sparse evidence to direct clinical care. Thus, the development of safe and effective regimens for pain management is needed in these complex situations. Case Presentation: We present a case of a 70-year-old man with a history of opioid use disorder and ongoing heroin use who underwent concurrent chemoradiotherapy for squamous cell carcinoma of the vocal cords and larynx. His treatment course was complicated by psychosocial barriers, missed appointments, prior adverse reaction to buprenorphine/naloxone, and self-treatment of his cancer-related pain with heroin. He was referred to Palliative Care for management of his cancer-related pain. Medications for opioid use disorder were recommended prior to use of full opioid analgesics for cancer pain. However, the patient had adverse effects from buprenorphine/naloxone and his cancer treatment schedule conflicted with the methadone clinic schedule. DλØŜy˝úKŜ Ŏ2Y˝LJfŜÈλúè 2ŦűKλă LJl·ûλŜyűûă LJl·λy˝ℕŜIjdzλℕŜY˝Ŝyűă! ŘŘλŎûλ2y˝ Medicine was consulted, and they collaborated on initiation of buprenorphine patches, which led to improvement in cancer pain, decreased symptom burden, and better treatment adherence. Conclusion: One existing case reports the benefit of Addiction Medicine consultation for opioid de-escalation support in a HNC survivor with long-term opioid use. Here we document the role of collaboration between Palliative Care and Addiction Medicine during active cancer treatment to support a HNC patient with significant OUD to develop safe pain management strategies.
Tyler Crowe Finalist	*Empyema Necessitans: A Rare Complication Despite Clinical Improvement*

placement and removal later that hospitalization 3 weeks prior. Though thorough workup on admission did not demonstrate a clear infectious cause, pulmonary edema and a left-sided pleural effusion were present. Her respiratory clinical picture was clouded by comorbid COPD requiring oxygen at baseline and heart failure with preserved ejection fraction. She responded well to empiric treatment with high-dose steroids, broad-spectrum antibiotics, and aggressive diuresis (net negative 20 liters), gradually improving to her home oxygen requirement in 10 days. She was afebrile throughout. During this time she complained of acute-on-chronic back pain, especially over her left thoracic region. She had fallen several times in the week prior to admission, and took pain medication daily. Serial examination initially showed diffuse tenderness without other abnormalities progressing to profound tenderness and induration in 48 hours. Subsequent CT imaging showed a left-sided, loculated pleural effusion with significant extra-thoracic extension consistent with empyema necessitans. This was successfully drained by Interventional Radiology, who placed two drains via CT-guidance. Initial output was noted to be purulent, though cultures had no bacterial or fungal growth and acid-fast staining was negative. Drain output quickly slowed. Her pain was improved, and she remained otherwise both hemodynamically stable and afebrile as before. She was transferred successfully from the ICU, but unfortunately her respiratory status later worsened. In the setting of these setbacks, anticipating the complex cardiothoracic procedures to completely treat her empyema necessitans, and her overall declining health, the patient elected for comfort care. She passed away peacefully with her family present at bedside.

Discussion: This case shows the importance of thorough physical examination and reassessment of the complete clinical picture. Because of the rarity of this complication and insidious onset, empyema necessitans can be a challenge to many clinicians. Given the significant morbidity and complexity of management, recognition of this rare complication 14(en)-19(t):

	crypt epithelial nuclei with multinucleation with surrounding suppurative inflammation and necrosis (Figure 4). CMV, HSV type 1 and 2, VZV, spirochete immunohistochemistry testing of the rectal ulcer tissue was negative. Acid-fast and fungal staining of the tissue found no organisms. A skin and rectal lesion was swabbed and PCR-based DNA assay for viral testing was performed. The Minnesota Department of Health confirmed a positive mpox (orthopoxvirus) test. The patient was restarted on ART and on tecovirimat via clinical trial. Conclusion: This case demonstrates the rare presentation of proctocolitis in an immunodeficient patient with Mpox. Identifying Mpox infection can be challenging as patient symptoms and appearance of the rash may be non-specific. Utilizing endoscopy and mucosal biopsy may be beneficial in patients with symptoms concerning for Mpox who present with rectal bleeding or rectosigmoid wall thickening identified on imaging.
Madeline DeAngelo Dr. Griffin Reed Dr. John Davis	*A 45-year-old man with Joint Pain and Polyneuropathy* Case Presentation: A 45-year-old man presented to the emergency department for chronic abdominal pain. His medical comorbidities included longstanding tobacco use with 30 pack-years, prior alcohol use, and esophagitis with gastric and duodenal ulcers. Recent past medical history included new diagnosis of rheumatoid arthritis, necrotizing pancreatitis, and LJ№2Ǝ№ŠăăλØŜ LJ2fêyŜdz№2LJI·úĸè λyŎfdzŘλyƎ I· ŦƵ2ű Ř№2LJ℗ﷺ Five months prior to admission, he developed bilateral hand and foot pain. His primary care provider referred him to a local rheumatologist. Three months prior to admission, he received a diagnosis of seropositive rheumatoid arthritis with elevated rheumatoid factor and anti-cyclic citrullinated peptide (anti[(-)] TJETQq171.65 67.025 353.27 496.83 reW*nBT/F

	rheumatoid arthritis but can less commonly present early in disease course. The clinical features of rheumatoid vasculitis are diverse, with some individuals affected by only localized or self-limiting disease, and some affected by life-threatening end-organ ischemia. Clinical features often include peripheral neuropathy, necrotic ulcers, hemorrhagic blisters, palpable purpura, and constitutional symptoms, but can progress to involve multiple end organs manifesting as bowel ischemia or myocardial infarction. Rheumatoid vasculitis is primarily a clinical diagnosis but does involve serological markers and often histopathology. Serological markers of rheumatoid factor and anti-CCP are typically strongly positive. Histopathology may show evidence of an inflammatory infiltrate, fibrinoid necrosis, perivascular cuffing, axonal degeneration, and immune complexes. The treatment for rheumatoid vasculitis involves immunosuppression, with the cornerstone of initial management being high-dose glucocorticoids. Glucocorticoids in combination with either rituximab or cyclophosphamide I·ŴŜ dzăŜŘ ű2 Ô2yűŴ2fŘλăŜI·ăŜΣ ǿλűK dzăŜ 2ŦŴλűdzÈλϒI·ō 2ŦűŜyϒōŜλyΞ űKŜ ÔfλyϏÔλI·yϑă choice given the more favorable safety profile. The prognosis of rheumatoid vasculitis remains quite poor despite improvements in immunosuppressive therapies.
Joshua Elmer Dr. Claudia Gyimah Dr. Gustavo Cortes Puentes	*A Classic Presentation of Cefepime Neurotoxicity* Case presentation: A 68-year-old female with history significant for skull base osteomyelitis on 6-week course of cefepime presented from home with 1 day of altered mental status, nausea, and vomiting. On day of presentation, she woke up confused appearing and nonverbal in response to KŜŴ ăLJ2dzăŜϑă IjdzŜăűλ2yãΦ I ŜŴ KdzăōI·yŘ I·fă2 yŽűŜŘ yŜǿ 2ŎÔI·ăλ2yϽI·f ?ŜŴϽλyΞ movements in the upper extremities. He denied any known toxic ingestions and reported good compliance with her home medications. Regarding her osteomyelitis, cefepime was initiated 3 weeks prior to presentation and was self-administered at home through a PICC line at a dose of 2 g[illegible]

	no signs of infection. Given his history of relapsing right foot pain, gout was considered and a serum uric acid level was found to be elevated to 12.4. Aspiration of the left ankle joint was attempted but revealed no MSU crystals. He subsequently underwent DECT of his feet and lumbar spine which showed osseous erosive changes of his MTP/IP joints and T11-S1 endplates with green pixelation, consistent with MSU deposition. He was started on renal dose colchicine and low-dose prednisone with complete resolution of his symptoms. Discussion: Axial gout is an under-recognized clinical entity often misdiagnosed as osteomyelitis, tumor, or spinal stenosis. It can present as localizing back pain with associated radiculopathy. Studies suggest that the prevalence of axial gout may approach 34%. Diagnosis can be challenging and is often made after biopsy or during surgery. DECT can be a useful tool to diagnose spinal gout with a high sensitivity and specificity, although it might not detect MSU crystals during flares. While there are no current guidelines regarding management of spinal gout, case reports suggest that medical management is equally efficacious when compared to surgical interventions. In summary, clinicians should maintain a high degree of suspicion for axial gout in patients presenting with back pain, especially if they have concurrent arthralgias in the setting of either metabolic syndrome or chronic kidney disease.
Miguel Gomez Dr. Carla Borre Elizabeth Farkouh Dr. Alex Danielson Dr. Adam Sawatsky	*Turning Red: A Case of Vancomycin Induced DRESS after Total Knee Replacement* / l·ăŜ LJℕŜăŜyűl·ûλ2y℞! py-year-old man was admitted for continued intermittent fevers and a progressive rash after starting a 6 week course of

Dr. Adina Cioc
Dr. Daniela Guerrero Vinsard

Introduction: Langerhans cell histiocytosis (LHC) is a proliferative disorder characterised by abnormal accumulation of antigen presenting cells known as Langerhans cell. Though they are vital immune system components, the proliferation of these cells can lead to a wide variety of symptoms ranging from very benign forms to disseminated, aggressive diseases. The BRAF V600E mutation is present in more than half of the cases, and activation of mitogen-activated protein kinase(MAPK) pathway is a key driver of this neoplastic disorder. LHC most commonly affects the skin and bones but can also involve the pituitary gland/central nervous system, liver, spleen, lungs and very rarely GI tract.

Case Presentation: Our case is of a 64-year old man with history of melanoma who presented to the primary care clinic for annual follow-up with no major complaints and a benign physical exam. A low dose CT chest was ordered as a part of routine lung cancer screening which showed normal lung findings but mild diffuse oesophageal thickening. He had no GI symptoms except occasional heartburn. Upper endoscopy was done which revealed a few dispersed flower-like diminutive lesions in the gastric body and fundus. Biopsies were consistent with LHC with BRAF V600E+. The CD1a and S100 are the most characteristic combination of immunohistochemical stains for Langerhans cells which were also positive. The patient was referred to oncology for further management. A PET/CT was done to analyse the extent of disease which showed the tumour burden being restricted only to the stomach. Considering asymptomatic presentation and limited anatomical location, it was decided to follow the patient every 6 months with PET/CT for disease progression with no active intervention.

Discussion: LHC is an extremely rare disease of childhood with an incidence of 2-5/million children per year which is even more rare in adults. Of all adults LHC cases (appros0(h)-19(a)-21(n)-19(i)47(n)-19(c)14(id)-17(en)-21(c):

	in determining prognosis and governs the duration and type of treatment in such cases.

Grace Hagan
Dr. Michael Cullen
Dr. Frank Brozovich

	developed acute hypoxic respiratory failure associated with worsening lactic acidosis peaking at 25 mmol/L, which required ICU transfer and intubation. A bronchoalveolar lavage was performed and findings were suggestive of diffuse alveolar hemorrhage (DAH). Despite intensive supportive measures and treatment with hemin, vitamin E, and ursodiol, her condition deteriorated, prompting the use of TPE and RBC exchange as salvage therapies. Manual RBC exchange was performed twice at the bedside, leading to near-immediate resolution of her metabolic derangements. She then underwent alternating TPE and RBC exchanges, with the first four performed daily, resulting in an improvement in her protoporphyrin levels. She was discharged home and continues on hemin, hydroxyurea, and TPE/RBC exchange maintenance therapy. Discussion: Acute porphyria flares can have life-threatening implications; it is critical that they are recognized so appropriate treatment can be initiated. XLP is caused by an X-linked ALAS2 mutation, leading to ALAS2 synthase overactivity and excessive protoporphyrin production. This case is unusual ŘdzŜ ű2 úĸKŜ LJI·úʌŜyűűă I·ƎŜ 2ŧ 2yãŜűΣ ădzƎƎŠăűʌyƎ I· LJ2ăăʌōfŜ I·ŎIjdzʌNJŜŘ Ŝűʌ2f2Ǝè Σ and the severity of her crises. Complications include phototoxic reactions, gallstones, cholestasis, and liver failure. Treatment for acute porphyria flares in XLP includes ursodiol and cholestyramine to increase protoporphyrin excretion, hydroxyurea to decrease erythrocyte production, hemin to suppress ALA synthase, and TPE/RBC exchange to remove excess protoporphyrins. Manual whole blood exchange, such as in our case, can provide an alternative effective treatment when hemin or apheresis are not available.
Mason Hinnke	*Ascariasis Lumbricoides-Induced Ascending Cholangitis: A Case Report of Parasitic Complications* Introduction: Ascariasis lumbricoides is one of the most common human helminth infections in the world. Transmission occurs through ingestion of either contaminated water or food. Patients can have a variety of symptoms, ranging from either asymptomatic to respiratory symptoms to severe intestinal obstruction. Case Presentation: The patient in this case is a 34-year-old female with a past medical history of a recent admission for choledocholithiasis status post cholecystectomy one month ago, who was admitted with acute onset of abdominal pain. Following her recent procedure, she previously was doing well aside from minor postoperative pain but then woke up on the evening of admission with severe epigastric pain, emesis, fevers and chills. Upon arrival to the ED, she was hypotensive into the 90s/30s, heart rate was in the 90s and she was febrile to 38.8 celsius. Her initial labs were notable for a white blood cell count of 12.5, hemoglobin of 10.6 and an absolute eosinophil count of 1.9. Her liver function tests were abnormal with an ALT of 331, AST 198 and alkaline phosphatase of 223. Social history was acquired and she recently traveled from Ecuador to the US via the Darien gap and had been consuming water from deep in the amazon jungle. CT of the abdomen was ordered which revealed extensive intrahepatic biliary dilatation as well as a centrally hypoattenuating collection which was suspicious for an intrahepatic abscess. Her clinical picture was overall concerning for ascending cholangitis so she was started on IV Zosyn, given IVF and

	have urinary retention, with neurogenic bladder, requiring chronic indwelling foley catheter. Ultimately, the left atrial appendage was too small to place a Watchman device, and the patient was discharged from the hospital to a transitional care facility, still requiring apixaban. Fortunately, the patient has not had subsequent bleeding complications. On follow-up with Cardiology, sotalol was discontinued, as the patient has had only one known atrial fibrillation event. He has been prescribed an outpatient, 14-day cardiac monitor, the results of which are pending. Discussion: While the WATCHMAN device has been found to be noninferior to anticoagulation for long term outcomes in patients with atrial fibrillation and indications for long term anticoagulation, this case details one unfortunate potential outcome in a patient undergoing placement of a WATCHMAN device. This case highlights how every procedure carries with it some risk. When pursuing novel therapies, it is important to continue to engage in a thorough investigation of symptoms and disease patterns before initiating invasive modalities. This case of provoked atrial fibrillation would have certainly benefited from further work-up and more time to determine burden of disease before pursuing a seemingly low-risk procedure that had devastating outcomes for the patient.
Guneet Janda	*A Challenging Case of Multifactorial Anemia* Case Presentation: A 69-year-old female with a history of type 2 diabetes mellitus and chronic iron deficiency anemia (IDA) presented with acute on chronic profound fatigue and weakness. Duration of her symptoms was 10 years and worsened to the point she was forced to leave her nursing job. Two weeks prior to her presentation, her fatigue had progressed to the point where she was largely bedridden. She had IDA dating back to her teenage years. Her hemoglobin (Hb) had dropped to as low as 5 mg/dL while pregnant. She had intermittent anemia over the past few decades for which she received intramuscular injections of iron. Also reported a history of heavy menstrual bleeding but was post-

ventricular size with moderate-severely reduced systolic function. Upon extubation, he sustained mild short-term memory loss and continued mild hypotension. He was discharged home on clopidogrel for 12 months and apixaban indefinitely.

Discussion: Differentiating between right ventricular MI and massive PE is a challenging clinical scenario. This case illustrates the importance of rhythm pathophysiology in circulatory arrest as a guide towards etiology and management. Pulseless electrical activity is the presenting rhythm in 65% of PE-induced arrests, whereas ventricular fibrillation is strongly linked to acute coronary syndrome and ischemia. ECG can show right bundle branch block and ST-

	Differentiating secondary achalasia from idiopathic/primary achalasia poses a significant diagnostic challenge. Standard treatments for achalasia are ineffective τ and potentially harmful τ in cases of secondary achalasia, delaying the diagnosis of underlying malignancies. EGD with biopsy is recommended in all patients with suspected achalasia to exclude malignancy. A short symptom duration (<5 months), and difficulty passing the endoscope through the LES should raise suspicion for secondary achalasia. Additional evaluations, including abdominal CT for regional lymph nodes and EUS for submucosal and infiltrative lesions, are valuable in informing the diagnosis.
Muneeb Khan	*Alveolar Hemorrhage from Severe Mitral Regurgitation, Uncommon Complication of a Common Abnormality* Introduction: Presenting a case of alveolar hemorrhage in a patient with a

	by dasatinib, a known complication of tyrosine kinase inhibitors. The [illegible]-standing issue and not one that required any intervention. Surprisingly, echo during admission did not show rupture of the chordae tendineae or papillary muscles, meaning the decompensation was not from acute mitral valve failure. Instead, the backflow through the intact valve worsened acutely in the setting of severe [illegible] the [illegible] causing a flash pulmonary edema, respiratory failure, and most shockingly, alveolar hemorrhage.

Ameya Kumar

etiology of shock can be diagnosed at bedside, especially with the incorporation of point-of-

	Introduction: Myalgias are a frequently reported complaint in primary care, and often attributed to statins. While true statin-related myalgias are infrequent overall; in rare cases they can result in severe complications including myonecrosis and rhabdomyolysis that can be life threatening. Case Presentation: A 48-year-old male with a history of type 2 diabetes, hypertension, and previous CVA with residual L sided weakness presented with 10 days of generalized weakness and exertional chest pain. Labs were notable for moderately elevated transaminases and a HS troponin T of 1200. Initially, a cardiac etiology seemed the most likely cause of his symptoms. However, serial HS troponin T measurements were stable, there were no notable EKG changes, and he remained symptom free. Further workup revealed a severely elevated CK to 17,000. Serial dilutions of HS troponin I were negative suggesting the markedly high troponin T represented fetal troponin from skeletal muscle ischemia. Cardiac MRI returned negative for myocarditis, TTE was unremarkable, and ANA returned positive. Muscle biopsy revealed an active severe necrotizing myopathy. IgG 3-hydroxy-3-methylglutaryl-coenzyme A reductase (HMGCR) was positive, confirming the diagnosis of necrotizing autoimmune myopathy (NAM), which has been described in a subset of statin-treated patients. He improved with steroids and was subsequently discharged to inpatient rehab. On follow up with outpatient rheumatology, he completed IVIG therapy and remains on high dose steroids and methotrexate with ongoing improvement. Lifelong statin avoidance was recommended. Conclusion: This case illustrates a potential severe complication of statin therapy, necrotizing autoimmune myopathy. Although rare, this complication cannot be missed and requires urgent rheumatologic evaluation and lifelong avoidance of statins.
Leeore Levinstein Catherine Halley Dr. Kanchan Hulasare Dr. Elizabeth Schroer Finalist	*Atypical Presentation of Leukemia as Post-*

by atypical lymphoid infiltrate with myeloid features, consistent with leukemia cutis. He was started on appropriate therapy.

Discussion: Vaccinations are known to cause a variety of cutaneous reactions. These reactions are generally benign, have complete spontaneous resolution, and require no additional management. However, new onset dermatologic disease can be mistaken for an adverse vaccine reaction, causing a delay in diagnosis or even misdiagnosis. In this case, a rash manifesting shortly after vaccination was found to be leukemia cutis. This case highlights that with new onset rash maintaining a broad differential diagnosis is critical, especially when the rash is unresolving or worsening. In this setting, pursuing further evaluation such as skin biopsy can be a crucial diagnostic step in determining the etiology of a rash. Consideration of cutaneous diseases, such as leukemia cutis, is important for timely diagnosis and treatment of new onset rash.

Miranda Lin
Dr. Thanh Ho

A Young Patient with Blood Loss Anemia

Introduction: Anemia is a common symptom of a broad list of etiologies. Here, we present a rare cause of acute blood loss anemia in a young adult patient.

Case Presentation: A 45-year-old healthy male presented to his primary care physician with a three-week history of fatigue, headaches, diffuse myalgias, pallor, and exercise intolerance. He recently started taking Ibuprofen for pain and had two episodes of melena. Physical exam was remarkable for pallor. Pertinent laboratory studies revealed hemoglobin 6.2, mean corpuscular volume 65.7, leukocytes 5.7, platelets 350, creatine kinase 129. Lyme, Anaplasma, Erlichia, Babesia, and Epstein-Barr Virus studies were negative. Additional labs included low serum iron (11), high transferrin (380), high total iron binding capacity (475), and low transferrin saturation (2), consistent with iron deficiency anemia. He was admitted for further work up and received red blood cell transfusions and iron infusions. He dzyŘŜNøŜyŰdzLJLJŜN ŜyŘ2ăÖ2LJèΣ øKλÕK NŜØŜI·tŜŘ .I·NNŜŰűűă Ŝă2LJKI·Ǝdză΢ ŜN2ăλØŜ gastropathy, and a 4.9 cm submucosal, ulcerated mass in the second portion of the duodenum. Endoscopic ultrasound with fine needle biopsy of the duodenal mass was performed, which revealed gastrointestinal stromal tumor (GIST). CT abdomen/pelvis showed the large duodenal mass with no evidence of metastatic disease. The patient was referred to general surgery and medical oncology for management of GIST with resection and perioperative imatinib, an oral tyrosine kinase inhibitor.

Discussion: Anemia in an otherwise healthy patient is a symptom of an underlying medical condition. The differential is broad and includes: blood loss, malabsorption of nutrients for blood cell production, medications, inherited mutations, infections, and malignancies. Mean corpuscular volume helps distinguish microcytic, normocytic, and macrocytic anemia. Microcytic anemia is caused by defective hemoglobin synthesis from deficiency in iron (ie. Nutritional, blood loss), globin chains (ie. Thalassemia), or heme (ie. Sideroblastic anemia, lead poisoning). Macrocytic anemia is caused by megaloblastosis (ie. Folate deficiency17(d)25-1917(d)25-1917(d)25-1917(d)25

	presenting symptom for leptomeningeal carcinomatosis. Leptomeningeal carcinomatosis is a rare metastatic site for lung adenocarcinoma, occurring in 3-5% of non-small cell lung cancer patients. Plateau waves are an underrecognized consequence, resulting from short ICP spikes, with symptoms including altered mental status, headache, ataxia, tonic posturing, and visual changes. In acute settings, diagnosis is complicated as episodes can mimic seizures, or even result from seizure, and be overshadowed by significant comorbid disease. ICP spikes result from impaired CSF resorption, however, concomitant ventricular stiffening may hide radiographic evidence including ventriculomegaly and hydrocephalus. CT has poor sensitivity for leptomeningeal disease, while MRI is most sensitive (76-87%). Leptomeningeal carcinomatosis represents a poor prognosis, with elevated ICP necessitating pressure stabilization via CSF diversion, such as lumbar puncture or ventricular drain placement.
Danielle Mangine Dr. Amy Holbrook	*Mad Tau Disease* Introduction: Prion diseases are rare neurodegenerative diseases that lead to rapidly progressive dementia and other devastating neurologic decline. While there are different variants and kinds of prion diseases, sporadic Creutzfeldt-Jackob disease (CJD) is the most common human form. In the United States, roughly 350 cases of CJD are diagnosed each year. The diagnosis of CJD remains challenging due to its rarity and similarity to other diseases presenting with rapidly progressive dementia. Case Presentation: A 69-year-old male with a past medical history of hypertension, hyperlipidemia, and type II diabetes presented with two months of rapidly progressive memory loss, impaired executive functioning, speech impairment, increased confusion, and gait abnormality. On ED presentation, he was vitally stable. CBC, BMP, LFTs, TSH, and ammonia were within normal limits except for mild hyperglycemia. An MRI of the brain showed abnormal diffusion restriction of right greater than left caudate/putaminal nuclei and right hemispheric cerebral cortices. The radiologist opined that MRI imaging was possibly consistent with Creutzfeldt-Jakob disease (CJD). Neurology was consulted to assist in diagnosis of rapidly progressive neurologic symptoms. Video electroencephalogram (vEEG) was initiated and showed generalized abnormalities that suggested diffuse bilateral cortical dysfunction and encephalopathy with generalized periodic discharges throughout. Additionally, the patient underwent a lumbar puncture for CSF analysis which only showed two nucleated cells. Meningitis/encephalitis multiplex PCR was negative, making CNS infection unlikely. Additional CSF studies were sent out to test for 14-3-3 protein and T tau protein. CT chest/abdomen/pelvis was negative for malignancy lowering suspicion for a LJI·NI·yŜ2LJfI·ăűλŎ LJN2ŎŜăă¢KŜ LJI·űλŜyűűă Ŏ2dzNăŜ ǿI·ă Ŏ2Y LJfλŎI·úŜŘ ōè I· NI·LJλŘ response called for seizure-like activity. Review of vEEG demonstrated progressive bradycardia to a total of eight seconds of asystole followed by tachycardia. Ultimately, the combination of presenting symptoms, MRI, CSF, and vEEG findings were most consistent with CJD. Palliative care was consulted for assistance with goals of care given poor and rapid prognosis with CJD. The patient was transitioned to comfort care and discharged to home with home hospice. The patient died within weeks of discharge. Send out CSF studies returned: 14-3-3 protein positive and T tau protein > 20,000,

apical/lateral hemothorax, necessitating reoperation to remove a retained clot. During this procedure, a ruptured abscess in the left lower lung was discovered, resulting in a left lower lobe resection.

Discussion: This case highlights the rapid progression of a small left pleural effusion with consolidation into a massive multiloculated empyema with near complete collapse of the left lung over the span of 5 days. SAG organisms are commonly encountered in oral flora, particularly prevalent in individuals with dental caries or abscesses. In patients who develop suspected aspiration pneumonia or radiographic evidence of pneumonia in the form of consolidations or pleural effusions, extra considerations must be taken to ensure these cases do not progress into life

recurrent asthma symptoms. Our patient met diagnostic criteria for ABPA through her predisposing asthma, positive serum anti-

anemia with hemoglobin of 7.5 g/dL and ferritin of 3 ng/mL, indicating iron deficiency anemia (IDA). Folate, vitamin B12, and vitamin D levels were normal. Cardiac workup, including ECG, echocardiogram, cardiopulmonary stress test, and Holter monitoring, was negative, lowering suspicion of cardiogenic syncope. She denied blood loss including heavy menstrual and gastrointestinal bleeding. Nonetheless, concerns remained about occult bleeding, malabsorption, and dysautonomia. EGD excluded upper gastrointestinal bleeding. Colonoscopy was declined due to prep intolerance. Given her low ferritin levels, she was started on intravenous iron repletion. H. Pylori breath testing also returned positive, and she completed treatment with confirmed eradication. At follow-up, hemoglobin improved to 10.2 g/dL and ferritin to 158 mcg/L. She reported increased energy and significantly fewer syncopal episodes.

Conclusion: This case emphasizes the importance of maintaining a broad differential when evaluating LOC to include both syncopal and non-syncopal causes. Syncopal etiologies for LOC included cardiogenic (arrhythmias, structural heart disease), reflex (vasovagal, situational, carotid hypersensitivity), or orthostatic (autonomic failure, postural orthostatic tachycardia syndrome). Non-syncopal etiologies included metabolic derangements (hypoglycemia) and neurologic/psychiatric manifestations (seizures, transient ischemic attacks, strokes, panic attacks). Given the substantial improvement following iron repletion, we concluded IDA was a major contributor to her presentation. We suspected her underlying etiology to be orthostatic hypotension based on her position-dependent and prodromal symptoms. Her low fluid intake and iron deficiency likely exacerbated her episodes through reductions in intravascular volume and hemoglobin levels, respectively. Although orthostatic testing was nonconfirmatory, this one-time finding cannot be used as a definitive rule-

	recent West Nile encephalitis was admitted for fever and lethargy. Chest X-ray demonstrated bibasilar opacities for which he received Zosyn for aspiration pneumonia. He then developed diarrhea and tested positive for CDI. He started PO vancomycin while systemic antibiotics were continued. He subsequently became hypotensive requiring stress dose steroids and vasopressors. CT chest abdomen-pelvis showed new airspace consolidation concerning for pneumonia, diffuse severe colitis, and diffuse anasarca. He was ultimately intubated. He started acetylcysteine with improvement and was extubated with decreasing vasopressor requirements. However, the following day, he became febrile and more hypotensive. Repeat CT showed severe pancolonic wall thickening and enhancement as well as transverse colon distention measuring up to 10 cm. His CDI progressed to FCDC with a toxic megacolon. /2f2ℕŜŏúl·f ădzℕƎŜℕè ø l·ă Ŏ2yãdzfúŜŘΣ ōdzú úKŜ LJl·úλŜyúΩă ₮l·Y^λfè ŘŜŏfλySŘ ădzℕƎλŎl·f intervention based on his previously expressed wishes. He transferred to the ICU, requiring ventilator and vasopressor support. His colonoscopy showed diffuse pseudomembranes consistent with late stage FCDI. He ultimately required four courses of FMT prior to transfer to a long-term acute care hospital for rehab with a prolonged course of fidaxomicin (and later vancomycin). After four months in the hospital, he was finally discharged home. A consolidation FMT using oral capsules was administered in the outpatient clinic. Conclusion: This case highlights the treatments available for FCDC when medications fail as well as the importance of shared decision-making and involving the appropriate specialties early. For FCDC, surgical interventions include colectomy and alternatively diverting loop ileostomy. More recently, FMT has emerged as a less invasive option to surgery without the associated KλƎK Y^2ℕúl·fλûèΨ ¢KŜ K2ăLJλúl·fΩă C a ¢ LJℕ2ű2Ŏ2f ₮2ℕ C/5/ Ŏ2yãλăűă 2₮ úKℕŜŜ phases. Initially, infusion of fecal microbiota achieves dampening of the systemic inflammatory response, which results in improvement in hemodynamic parameters. Antibiotics against C. difficile are continued during phase two. However, patients who have suffered severe/fulminant CDI remain at high risk for CDI relapse. Therefore, consolidation FMT is performed to repair the antibiotic-induced dysbiosis.
Lauren Pomerantz Dr. Henry Schultz	*A Master of Disguise: A Case Series of Transthyretin Cardiac Amyloidosis Masquerading as Heart Failure* Introduction: Transthyretin cardiac amyloidosis (ATTR-CM) is a common but underrecognized systemic disorder caused by tissue accumulation of a misfolded transthyretin (TTR) protein produced by the liver. ATTR-CM can mimic hypertensive heart disease, hypertrophic cardiomyopathy, concentric hypertrophy from aortic stenosis, and idiopathic HFpEF. ATTR amyloid is distinct from AL amyloidosis, a monoclonal plasma cell disorder. There are two types of ATTR amyloidosis: wild type (wt) and hereditary (v). Specifically, ATTRwt tends to be seen in older Caucasian men, and is responsible for 75% of ATTR-CM in the US. Over 130 mutations can lead to hereditary TTR amyloid (hATTR or ATTRv), each with a different phenotype. Here we present three cases of patients with ATTRwt cardiac amyloidosis.

cavitary necrotizing pneumonia. The patient underwent multiple interventional radiology (IR) coil embolization procedures and, despite several recurrences of massive hemoptysis, was successfully treated. This case emphasizes the challenges of early identification and management of this rare condition and the need for further research into improved diagnostic and treatment strategies.

Case Presentation: The patient, a 43-year-old male with a past medical history of Type 1 Diabetes, initially presented to the emergency department (ED) with pleuritic chest pain, cough, and shortness of breath following recent treatment for influenza B. During the evaluation, he was found to be in acute hypoxic respiratory failure, secondary to superimposed polymicrobial bacterial pneumonia. Cultures revealed the presence of methicillin-resistant Staphylococcus aureus (MRSA) and Streptococcus LJySdzY2yλI·Sφ 5ŜăLJλúŜ I·ƎƎNŜăăλØŜ YI·yI·ƎŜYŜyűΣ úKŜ LJI·ûλŜyűΩă Ô2yŘλúλ2y deteriorated rapidly, progressing to septic shock and acute respiratory distress syndrome (ARDS). Due to the severity of his condition, the patient was emergently intubated and placed on veno-venous extracorporeal membrane oxygenation (VV-ECMO) on 5/6/2024.

The clinical course was further complicated by the development of necrotizing pneumonia and pneumothorax, necessitating chest tube placement. Additionally, a Klebsiella ventilator-associated pneumonia (VAP) ø I·ă λŘŜyűλŦλŜŘΣ ŦdzNúKŜN ŜÈI·ÔŜNōI·ûλyƎ úKŜ LJI·ûλŜyűΩă NŜăLJλNI·ú2Nè Ô2yŘλúλ2yφ hy 5/25, the patient experienced sudden massive hemoptysis, prompting an exploratory bronchoscopy and a computed tomography (CT) pulmonary angiogram. Although the initial imaging was negative for pseudoaneurysm, due to ongoing bleeding, the right bronchial artery was embolized.

Recurrent hemoptysis episodes occurred on 6/4, 6/7, and 6/8, with subsequent imaging on 6/4 revealing a 4mm pseudoaneurysm in the cavitary lesion. Additional coil embolization procedures were performed on 6/7; however, new pseudoaneurysms were identified on 6/11, necessitating further IR interventions on both 6/11 and 6/12. Despite these procedures, massive hemoptysis continued until a final coiling procedure on 6/19 ădzŎŎŜăăŦdzfŧè ăűI·ōλŧΩÎŜŘ úKŜ LJI·ûλŜyűφ !ŦűŜN úKλă LJN2ŎŜŘdzNŜΣ úKŜ LJI·ûλŜyűΩă condition improved significantly, allowing for decannulation from ECMO and mechanical ventilation. The patient was eventually discharged to a rehabilitation center on 8/13/2024, with planned discharge home on 9/3/2024.

Discussion: This case emphasizes the severity of Rasmussen aneurysms as a rare but dangerous complication of cavitary pneumonia. Despite the critical role of CT imaging in diagnosis, negative results do not rule-out their presence, especially in patients with hemoptysis. Recurrent bleeding is common even after successful initial embolization due to the formation of new aneurysms, underscoring the need for heightened clinical suspicion and repeat imaging in such cases. Prompt management through embolization or surgical resection is essential to prevent life-threatening hemorrhage. This case also highlights the need for further research into early recognition, improved diagnostic techniques, and more effective treatment options to reduce mortality and improve outcomes for affected patients.

	urinalysis was consistent with SRC, and the kidney biopsy was crucial in establishing the diagnosis. The subacute and chronic findings on kidney biopsy suggests damage occurred over time, limiting reversibility, possibly explaining her lack of response despite appropriate ACE inhibitor therapy. Early recognition is critical for improving outcomes in SRC; however, in subacute cases, irreversible damage may have already occurred at diagnosis. This case underscores that SRC can occur in lcSSc patients after decades of stable disease without typical risk factors. Clinicians should maintain a high index of suspicion for SRC in any SSc patient with new-onset hypertension and kidney dysfunction. Recognizing atypical presentations is essential for timely intervention, which may improve prognosis and preserve kidney function.
Jessica Seledotis	*Case of Metastatic Hepatocellular Carcinoma to the Brain* Introduction: Hepatocellular carcinoma (HCC) accounts for 75% of primary liver cancer in the world, and primary liver cancer is the second most common cause of cancer mortality (1). Risk factors for HCC commonly include viral hepatitis and alcohol-related liver disease, and now metabolic dysfunction-associated liver disease is increasingly being recognized as a major risk factor for HCC (2). Because of the broad risk factors and growing screening efforts, patients with HCC are surviving longer, and therefore sequelae, including rare sites of metastatic disease, are increasingly important to recognize. Case Presentation: A 63

	rare sequela of HCC which is clinically relevant as both the risk factors and survival of HCC are increasing.
Matthew Semler Dr. Mary Fredrickson	*A Rare Case of Dermatomyosis* Introduction: Dermatomyositis is an uncommon cause of muscle

	options, recurrence of bacteremia and concern with evolution to septic shock. Discussion: As the occurrence of multiple antibiotic allergies becomes more prevalent and resistance to multiple antibiotic therapies continues to rise, the utilization of hyperbaric oxygen therapy for the management of SSTIs in immunocompromised patients may offer an alternative therapy for the management of these patients. References 1: Ortega MA, Fraile-Martinez O, et al. A General Overview on the Hyperbaric Oxygen Therapy: Applications, Mechanisms and Translational Opportunities. Medicina (Kaunas). 2021 Aug 24;57(9):864. doi: 10.3390/medicina57090864. 2: Alkhateeb H, Said S, et al. DRESS syndrome following ciprofloxacin exposure: An unusual association. Am J Case Rep. 2013 Dec 4;14:526-8. doi: 10.12659/AJCR.889703.
Grant Simonson Dr. Jeremy Taylor	*False Sense of Sensitivity: An Initially Reassuring Presentation of Acute on Chronic Mesenteric Ischemia* Case Presentation: A 74-year-old man with a history including hypertension, type II diabetes mellitus, multivessel coronary artery disease, ischemic cardiomyopathy, atrial fibrillation on long-term anticoagulation, and peripheral arterial disease presented to the emergency department of a community hospital with acute postprandial lower abdominal pain and nausea. He described the pain as severe and unlike anything he had experienced before. Vital signs on arrival were normal, and physical examination demonstrated a comfortable appearing man with mild lower abdominal tenderness on deep palpation. Laboratory findings were notable only for leukocytosis

aortic repair, carotid dissection, ischemic stroke, patent foramen ovale with

Case Presentation: 60-year-old woman with a history of type 2 diabetes, hypertension, depression, moderate persistent asthma, pruritus nodularis, multinodular thyroid s/p thyroidectomy who presented for pelvic pain. She was postmenopausal with last menstrual period at age 45. Upon chart review, it was determined that an IUD was placed prior to beginning therapy with dupilumab for pruritus nodularis 15 years ago. The IUD was removed in clinic and cervical cytology and HPV testing was performed for routine cervical cancer screening. The pathologist noted bacteria consistent with actinomyces on HPV cytology. The IUD was discarded prior to this result and IUD culture was not obtained. The patient was called at home to disclose results and described experiencing fevers, chills, and body aches for the

Further review of systems was negative. She was afebrile and hemodynamically stable in the ED and physical exam was overall unrevealing. CBC was notable for new leukocytosis of 19.2. The remainder of her labs including a CMP and TSH were normal. CT head was negative for acute findings. Additional studies including urinalysis, urine culture, COVID/flu swab, and chest x-ray were normal or negative for acute changes. She was admitted for ongoing toxic/metabolic workup of potential encephalopathy.

Fortunately, her leukocytosis resolved on recheck after a 1-liter fluid bolus and the remainder of her lab work including blood cultures returned normal. Inpatient neurology consultation provided no additional recommendations. A thorough history obtained by her inpatient medical team raised the possibility of ME/CFS, noting the CDC recommended Institute of Medicine 2015 Diagnostic Criteria: (1) significant new-found fatigue and inability to perform basic activities compared to prior for at least 6 months, (2) post-exertional malaise (notable worsening of her 21(n)25(()-uW