

July 30, 2018

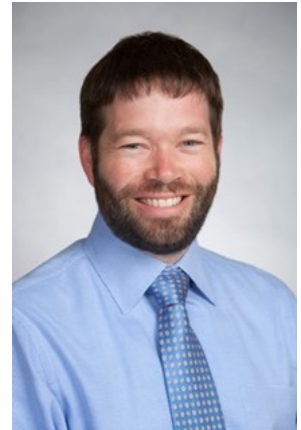


# CTS INSPIRATIONS

## CTS NEWS

### President's Message

The July edition of CTS Inspirations highlights one of my favorite events at our Annual Northern California Educational Conference: The CTS Scholars Poster Competition. We had over 20 entries from throughout California, and it is my pleasure to feature the 3 CTS Scholar Award winners below. **Drs. Pugashetti, Stevens and Sweeney** are very deserving awardees! We hope you will consider submitting your work to the next CTS poster competition.



On a far less positive note, California wildfire season is back. Our thoughts at CTS are with all those affected by these fires. Keep reading below for tips and advice from CTS and ATS on how to stay healthy during these fires and the resulting effects on air quality.

Finally, I would like to remind you to register for the **CTS Southern California Educational Conference** which will take place at Hilton Irvine on September 21-22, 2018. Review the brochure at:

<https://calthoracic.org/wp-content/uploads/2018/06/CTS-FALL-2018-BROCHURE.pdf>

The deadline for Early Bird discounted registration is August 1<sup>st</sup>. You can register at the following link. <https://calthoracic.org/events/2018-fall-annual-educational-conference/>

The two-day conference, good for over 14 CME credits, will feature lectures, case presentations and expert panel discussions in an intimate, collegial setting. Day 1 will target a multidisciplinary audience and will feature **Advancing Multidisciplinary Care in COPD and Interstitial Lung Disease**. Day 2 will feature a deep dive into two important topics: **Pulmonary Hypertension** and **Asthma**. Attendees can register for one or both days. We hope to see you in Orange County this Fall!

A handwritten signature in black ink, appearing to read "Philippe Montgrain".

Philippe Montgrain, MD  
President, California Thoracic Society

## CTS Scholar Awards

The 4th Annual CTS Poster Competition was held this past January during the annual Winter Meeting in Carmel, CA. Organized by current CTS Secretary Laren Tan, the session featured over 20 entries from throughout the state. The session allows participants to engage one on one with international caliber faculty judges in three categories: research, pulmonary and critical care. A President's Award is also given to the overall winner. All awardees are named CTS Scholars and given a cash prize of \$100. This year's winners are featured below. Interested in participating in next year's event? contact CTS at [info@calthoracic.org](mailto:info@calthoracic.org).

### Research (and President's Award)

#### **Cystic Fibrosis Pulmonary Exacerbations 30-day Readmissions in 2014: Insight from Nationwide readmission database**

**Janelle V Pugashetti MD, Shehabaldin Alqalyoobi MD, Machel Wilson, Ph.D, Brian Morrissey MD UC DAVIS**



**Background:** Cystic fibrosis pulmonary exacerbations negatively affect quality of life, increase healthcare costs, and are associated with impaired sleep and neurocognitive abilities. Past studies have evaluated need for re-treatment with IV antibiotics, but there are little data regarding factors associated with readmission. We assessed the overall 30-day readmission rate for Cystic Fibrosis patients with pulmonary exacerbation in 2014 and identified characteristics associated with 30-day readmission.

**Methods:** We queried the 2014 nationwide readmission databases to identify all patients aged  $\geq 18$  years who admitted with CF pulmonary exacerbation using International Classification of Diseases-9th Revision. We excluded patients who died, were electively admitted, and all patients who were discharged in December. Our primary outcome was 30-day readmission rate. Characteristics associated with 30-day readmissions were examined. We performed hierarchical logistic regression, adjusting for certain covariates.

**Results:** Among 14,894,613 admissions in 2014, we identified 4869 admissions due CF pulmonary exacerbation. 2448 readmissions met our inclusion criteria. The 30-day readmission rate was 11.7%. We found that younger age (adjusted odds ratio 0.890), number of chronic conditions (adjusted odds ratio 1.150), pulmonary circulation disorders (adjusted odds ratio 1.073), and admission to a rural hospital compared to a metropolitan hospital (adjusted odds ratio 27.322) were associated with a significant increase in 30-day readmission.

**Conclusions:** Of patients who were admitted in 2014 for cystic fibrosis exacerbation, 11% were readmitted in 30 days. Younger age, the number of pulmonary circulation disorders, the number of chronic conditions, and admission to a rural hospital are significant risk factors of 30-days readmission.

**Pulmonary:****A Co-Occurrence of Good Pastures Disease and Graves Disease Gizelle Stevens, MD Naila Khan, MD and Destry Washburn, DO Loma Linda University****Introduction:**

Goodpasture's disease (GPD) is a rare autoimmune disorder involving antibodies against an antigen present in glomerular basement membrane (GBM). It is estimated to occur in 0.1 cases per million population[1]. GPD has been rarely associated with other autoimmune disorders and we present a patient with positive anti-GBM antibody disease in the setting of newly diagnosed Grave's disease.

**Case Description:**

A 45-year-old female with no medical history presented with a 2 week history of dyspnea and hemoptysis. She complained of unintentional weight loss, worsening anxiety with associated nausea and diarrhea for 6 months. Patient also reported remote smoking history. On examination, she had exophthalmos with normal thyroid gland but was in moderate respiratory distress requiring ICU admission for hypoxic respiratory failure. Chest CT demonstrated diffuse ground glass opacities more severe in right lung. Due to progressively worsening respiratory failure despite antibiotic therapy for presumed pneumonia, bronchoscopy was performed revealing diffuse alveolar hemorrhage. Due to suspicion of autoimmune disorder, rheumatologic workup was performed and confirmed positive anti-GBM antibodies. Renal biopsy showed crescentic glomerular nephritis and linear deposits of antibodies. Thyroid studies revealed elevated free thyroxine (fT4 >6.3ng/dL) and low thyroid stimulating hormone (TSH <0.005 U/L) levels with positive anti-TPO and TSI antibodies suggestive of thyrotoxicosis. Urine histoplasma antigen was also found to be positive.

High dose steroids, plasmapheresis, cyclophosphamide, methimazole and propranolol were initiated. Meropenem and Itraconazole were also started. However, clinical course was complicated with acute renal failure, disseminated intravascular coagulation and massive pulmonary hemorrhage.

**Discussion:**

GPD is characterized by diffuse alveolar hemorrhage and rapidly progressive glomerulonephritis [1]. GPD presents many diagnostic and management challenges. Anti-GBM antibodies target the NC1 domain of the alpha-3 chain of type IV collagen found within basement membranes. It is hypothesized that a history of smoking and pulmonary infection can inflict cell damage, producing an immune epitope leading to the cascade of GPD [2]. This immune-mediated response was likely exacerbated by her underlying hyperthyroidism; as a result, the pulmonary infection, in conjunction with the physiological stress of GPD in the setting of untreated Grave's disease, created an untenable immune balance.[3] Therefore early evaluation is key to maximize treatment and recovery potential.

## Critical Care:

### Fatal disseminated *Strongyloides stercoralis* infection in a chemotherapy patient in Southern California.

Matthew Sweeney, MD; Raj Dasgupta, MD Huntingdon Hospital



#### Introduction:

*Strongyloides stercoralis* infection is very rare in non-endemic regions. Infection with the *Strongyloides* parasite can remain indolent for many years, then disseminate when an individual becomes immunocompromised. Disseminated disease is associated with a high mortality rate, and prompt recognition and treatment can significantly impact patient survival.

#### Case report:

A 65 year old female presented to our hospital with altered mental status. She was born in El Salvador, immigrating to the Southwestern United States twenty years prior. Three months before her presentation she had fallen while showering, fracturing her humerus and pelvis. During her hospitalization for these fractures her work-up revealed IgD kappa plasmablastic multiple myeloma. She was started on Velcade and dexamethasone, then sent to a SNF while awaiting surgical fixation of her fractures. Four weeks later she presented with hypoglycemia, septic shock and a petechial rash over her lower extremities. She was admitted to the ICU on pressor support. Her clinical course deteriorated with respiratory failure requiring intubation, and imaging demonstrated perihilar infiltrate that had not been present on admission. She developed severe ARDS, bronchoscopy was performed and pathology demonstrated “numerous parasites consistent with filariform larvae of *Strongyloides stercoralis*”. She was started on therapy with ivermectin but continued to deteriorate, developing multi-organ system failure. She was made DNR by her family, and shortly after went into cardiopulmonary arrest and died.

#### Discussion:

Infection with *Strongyloides stercoralis* is common, with a global prevalence estimated at 370 million. In non-endemic regions including the Western United States, it remains rare. A 2015 report by the CDC regarding incidence in Los Angeles County cited 14 cases in 2013 and 29 in 2014, an incidence of roughly 1.5 to 3.0 per million inhabitants. The majority of these cases were reported in immigrants from endemic regions. None of the reported cases consisted of hyperinfection syndrome.

Infection symptoms are often subclinical. Commonly reported manifestations are mild and intermittent gastrointestinal upset and pruritic rash. Pulmonary manifestations are typically an asthma-like illness that worsens with corticosteroid use. Eosinophilia is present in 10-70% of chronic cases.

Disseminated *Strongyloides* infections are most commonly associated with immunosuppression. Eosinophilia is rare in hyperinfection due to this association. Careful consideration should be given to patients with a history of residence in an endemic region. Testing prior to initiation of immune suppressing therapy in at-risk patients is key, as disseminated disease is associated with mortality rates approaching 80%.



## Wildfires Update

Another early start to California's wildfire season, or did the last one ever really end? As of this writing, there are fifteen major fires burning in the state including the Carr fire, the Ferguson fire, the Cranston fire, and the Marsh fire.

<http://abc7news.com/maps-wildfires-burning-across-california/3829366/> (Friday July 27, 2018)

<http://www.fire.ca.gov/general/firemaps>

### Wildfire Advice:

CTS published this piece last year which was adapted for the ATS website. ATS also has an excellent podcast available.

<https://calthoracic.org/wp-content/uploads/2017/12/CTS-Wildfire-Advice-2017.pdf>

## Wildfire Information

### California Smoke Info:

<http://californiasmokeinfo.blogspot.com/>

This is a voluntary website maintained by city, county, state, tribal and/or federal agencies to coordinate and aggregate information for California communities affected by wildfire smoke:

### SoCal Air Quality Map

<https://www.arcgis.com/apps/webappviewer/index.html?id=dd4a15deed8647edacb14f140ca83d05>

### State Air Quality Districts

<https://www.arb.ca.gov/capcoa/dismap.htm>



## CSRC Corner - by Rick Ford and Mike Madison

The California Society for Respiratory Care (<https://csrc.org>) remains committed to working with California lawmakers to maintain quality respiratory care and serve as advocates for patients with pulmonary disease. Respiratory Care Practitioners are now licensed to perform "conscious and deep sedation," "extracorporeal life support" and "other hospital approved procedures." In most cases, approval to perform these advanced procedures requires that the provider complete additional coursework as well as practical clinical work at the bedside.

The question arises as to who should define competency and education requirements? Currently, several organizations representing non RCP providers including LVNs and Perfusionists, etc., seek to define the scope of practice of respiratory care for their members. Hence, there is the potential for conflict with laws and regulations related to the practice of respiratory care as currently defined in Section 3700 of the Business and Professions Code, enforced through the California Respiratory Care Board. ([http://www.rcb.ca.gov/enforcement/forms/lawsregs\\_july17.pdf](http://www.rcb.ca.gov/enforcement/forms/lawsregs_july17.pdf))

SB 1003 would empower the RCB to designate such standards and education requirements. This year, the CSRC has sponsored legislation to clarify and ensure continuity in defining the scope and practice of respiratory care in California. Senate Bill 1003 is intended to identify the Respiratory Care Board as the sole agency to define regulatory standards as they relate to the practice of respiratory care, allowing the Board to respond to changes and advancements in practice and scope, and accommodate new procedures and therapies.

Specifically, SB 1003 would prohibit any state agency, as defined, except for the Respiratory Care Board (RCB) of California from defining or interpreting respiratory care for those licensed pursuant to these provisions, or from developing standardized procedures or protocols, unless authorized by these provisions or specifically required by state or federal statute. The bill would also authorize the board to adopt regulations to define, interpret, or identify “basic” respiratory services, “intermediate” respiratory services that require formal training, and “advanced” respiratory tasks services that require advanced training, as specified. More detail regarding the content of SB 1003 can be found at:

[https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill\\_id=201720180SB1003](https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180SB1003)

Aaron Read and Associates serves as the Legislative Advocates for the CSRC and recently reported some good news. SB 1003 has passed all committee votes in both the California Senate and Assembly. The bill continues to face no opposition and it is expected Governor Brown will sign SB 1003 into law by the end of August.

## Southwestern Journal of Pulmonary and Critical Care Medicine

### Volume 16, Issue 6

<b>Title</b> (Click on title to open the manuscript, <b>CME in Bold</b> )	<b>Journal Section</b>	<b>First Author</b>	<b>Year</b>	<b>Vol</b>	<b>Issue</b>	<b>Pages</b>	<b>Date Posted</b>
<a href="#">Phrenic Nerve Injury Post Catheter Ablation for Atrial Fibrillation</a>	Pulmonary	Sen P	2018	16	6	362-7	6/28/18
<a href="#">Medical Image of the Week: Intracavitary View of Mycetoma</a>	Imaging	Tseng S	2018	16	6	360-1	6/27/18
<a href="#">Evaluating a Scoring System for Predicting Thirty-Day Hospital Readmissions for Chronic Obstructive Pulmonary Disease Exacerbation</a>	Pulmonary	Yap V	2018	16	6	350-9	6/26/18
<a href="#">Intralobar Bronchopulmonary Sequestration: A Case and Brief Review</a>	Pulmonary	Majumdar U	2018	16	6	343-9	6/21/18
<a href="#">Medical Image of the Week: Neuromyelitis Optica and Sarcoidosis</a>	Imaging	El-Aini T	2018	16	6	341-2	6/20/18
<a href="#">Gilbert Hospital and Florence Hospital at Anthem Closed</a>	News	Robbins RA	2018	16	6	340	6/16/18
<a href="#">CMS' Star Ratings Miscalculated</a>	News	Robbins RA	2018	16	6	337-9	6/15/18
<a href="#">Medical Image of the Week: Pulmonary Amyloidosis in Primary Sjogren's Syndrome</a>	Imaging	Sen P	2018	16	6	336-7	6/13/18
<a href="#">The VA Mission Act: Funding to Fail?</a>	Editorial	Robbins RA	2018	16	6	334-5	6/8/18
<a href="#">Medical Image of the Week: Post Pneumonectomy Syndrome</a>	Imaging	Bixby B	2018	16	6	332-3	6/6/18
<a href="#">Sharpening Occam's Razor – A Diagnostic Dilemma</a>	Pulmonary	Sen P	2018	16	6	324-31	6/4/18
<a href="#">June 2018 Imaging Case of the Month</a>	Imaging	Gotway MB	2018	16	6	310-23	6/3/18
<a href="#">June 2018 Critical Care Case of the Month</a>	Critical Care	Fountain S	2018	16	6	304-10	6/2/18
<a href="#">June 2018 Pulmonary Case of the Month</a>	Pulmonary	Wesselius LJ	2018	16	6	296-303	6/1/18

## Southwestern Journal of Pulmonary and Critical Care Medicine

Volume 17, Issue 1							
Title (Click on title to open the manuscript, <b>CME in bold</b> )	Journal Section	First Author	Year	Vol	Issue	Pages	Date Posted
<a href="#">Keep Your Politics Out of My Practice</a>	Editorial	Robbins RA	2018	17	1	42-4	7/27/18
<a href="#">July 2018 Arizona Thoracic Society Notes</a>	Proceedings	Robbins RA	2018	17	1	41	7/26/18
<a href="#">Medical Image of the Week: Plastic Bronchitis in an Adult Lung Transplant Patient</a>	Imaging	Savajiyani S	2018	17	1	39-40	7/25/18
<a href="#">Ultrasound for Critical Care Physicians: Caught in the Act</a>	Critical Care	Ogbonnah U	2018	17	1	36-8	7/20/18
<a href="#">Medical Image of the Week: Medical Administrative Growth</a>	Imaging	Robbins RA	2018	17	1	35	7/18/18
<a href="#">The Highest Paid Clerk</a>	Editorial	Robbins RA	2018	17	1	32-4	7/15/18
<a href="#">Medical Image of the Week: Malposition of Central Venous Catheter</a>	Imaging	Muhailan M	2018	17	1	30-1	7/11/18
<a href="#">Medical Image of the Week: Fournier's Gangrene with a Twist</a>	Imaging	Akella P	2018	17	1	28-9	7/4/18
<a href="#">July 2018 Imaging Case of the Month</a>	<b>Imaging</b>	<b>Gotway MB</b>	<b>2018</b>	<b>17</b>	<b>1</b>	<b>15-27</b>	<b>7/3/18</b>
<a href="#">July 2018 Critical Care Case of the Month</a>	<b>Critical Care</b>	<b>Fountain S</b>	<b>2018</b>	<b>17</b>	<b>1</b>	<b>7-14</b>	<b>7/2/18</b>
<a href="#">July 2018 Pulmonary Case of the Month</a>	<b>Pulmonary</b>	<b>Brighton AM</b>	<b>2018</b>	<b>17</b>	<b>1</b>	<b>1-6</b>	<b>7/1/18</b>

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