July 18, 2017

CTS INSPIRATIONS

CTS NEWS

President's Letter

We are excited to announce our upcoming **CTS conference** at the **UCSD MET Center** in La Jolla on **Saturday September 30** and **Sunday October 1, 2017.** Two simultaneous meetings will be held**:** A hands-on **Advanced Ultrasound course on 9/30 and 10/1** and an updated **COPD Advanced Skills Training** on **9/30.** Experts will be presenting cutting edge, evidence based evaluation and management strategies that target advancing clinical practice in lung disease and comorbidities. For more information or to register, please see:

https://calthoracic.org/events/fall-symposium-educational-conference/

We are very grateful to **Philippe Montgrain MD, CTS Education Chair, Shazia Jamil MD** and the CTS Planning, Education and Multidisciplinary committees for their extraordinary work in coordinating these exciting courses. Philippe and his team have worked tirelessly on every component of the meeting from identifying expert faculty, a world class venue and CME and CEU accreditation. We are also very grateful to Phil Porte CTS Executive Director, Vickie Parshall, Dave Eubanks and Karen Lui in the CTS office for the outstanding conference planning and development.

This issue also highlights **Mike Peterson MD, UCSF Fresno** in our Who's who section. Mike embodies the highest ideals of professional excellence. In addition to being an outstanding clinician, leader, researcher, and advocate, he has been a stalwart colleague, friend and mentor to many of us in CTS. Mike reminds us that true leaders inspire through example, not just authority. We thank Mike for decades of service to CTS and as CTS President. His integrity, generosity and commitment to excellence are an enduring legacy that continue to inspire us all.

New Asthma Therapies

Praveen Akuthota, MD
University of California San Diego
Associate Clinical Professor

Disclosures relevant to this article: Dr. Akuthota has acted as a consultant to AstraZeneca and GlaxoSmithKline and has received research funding from GlaxoSmithKline.

- While the anti-IgE monoclonal antibody omalizumab has been FDA-approved for use since 2003, we are now more definitively entering an era of biologic therapies for asthma with the approval and ongoing development of multiple new agents.

- Two monoclonal antibodies against IL-5, mepolizumab and reslizumab, have recently been approved for the treatment of eosinophilic asthma.

- IL-5 is critical for the development, survival, and trafficking of eosinophils; therefore, targeting IL-5 is a strategy for targeting eosinophils in asthma.

- Patients with peripheral eosinophilia and refractory asthma are good potential candidates for anti-IL5 therapies, but the precise cut-off number of blood eosinophils remains an area of uncertainty.

- Other biologic therapies targeted to so-called “Th2” targets present in allergic asthma, such as IL-13, IL-4, IL-5, and their receptors, are in late stage development. We will need to refine our understanding of which therapy will best fit an individual patient.

In 2003, the anti-IgE monoclonal antibody, omalizumab (Xolair, Genentech/Novartis), was approved for use in the treatment of asthma. While this was an early preview of using biologic agents to specifically target components of allergic inflammation in asthma, we are now truly entering the era of biologic therapy in asthma, with multiple available agents and others in late stage development. Over the last two years, two monoclonal antibodies against IL-5, mepolizumab and reslizumab, have been approved by the FDA for eosinophilic asthma and are being increasingly used by clinicians. IL-5 represents an attractive therapeutic target given its central role in promoting eosinophil development, survival, and trafficking [1]. Animals models of asthma had previously suggested that eliminating eosinophils would potentially be effective in modifying histological changes associated with asthma [2]. Though initial studies of mepolizumab in unselected patients with asthma did not show improvement in lung function, subsequent studies of mepolizumab and reslizumab in patients with eosinophilic asthma (determined by sputum or blood eosinophilia, depending on the study) and using exacerbations as the primary outcome measure – demonstrated the benefit of these drugs [3-5].

As an add on therapy, Mepolizumab (Nucala, GlaxoSmithKline) is approved at a single dose of 100 mg given every 4 weeks by subcutaneous injection. Reslizumab (Cinqair, Teva) is approved as an intravenous infusion dosed by weight at 3 mg/kg given every 4 weeks. Both agents are generally well tolerated, with anaphylaxis not reported to mepolizumab and analphylaxis only very rarely reported to reslizumab (0.3% in clinical trials per the package insert).

Clinical trials have used varying definitions to categorize asthma as eosinophilic, and there remains equipoise in determining the cut-off number for peripheral eosinophil count that best predicts response or lack of response to the anti-IL-5 agents. An absolute eosinophil count of 200 cells per microliter is a reasonable threshold to use, though it is possible that patients with lower eosinophil counts may respond to drug and patients with higher eosinophil counts may have a higher likelihood of positive response. Also unknown at this point is the optimal duration of therapy, an issue of critical importance given the cost of biologic agents.

There are other biologic agents targeting specific components of the Th2 inflammation characteristic of allergic endotypes of asthma that have completed Phase III trials. These include, but are not limited to, monoclonal antibody to the IL-5 receptor (benralizumab, AstraZeneca) and monoclonal antibody to the IL-4-alpha receptor (dupilumab/Dupixent, Regeneron, approved in March 2017 for atopic dermatitis), which blocks both IL-4 and IL-13 signaling. Clinicians may soon be confronted with an increasing number of approved options for treating refractory asthma with biologic therapies. More work needs to be done and clinical experience gained to determine which drug is the best fit for an individual patient with refractory asthma.

References:

1. Akuthota P, Weller PF. Eosinophils and Disease Pathogenesis. Semin Hematol. 2012; 49:113-119.
2. Akuthota P, Xenakis JJ, Weller PF. Eosinophils: Offenders or General Bystanders in Allergic Airway Disease and Pulmonary Immunity? J Innate Immun. 2011; 3:113-119.
3. Pavord ID, Korn S, Howarth P, et al. Mepolizumab for severe eosinophilic asthma (DREAM): a multicentre, double-blind, placebo-controlled trial. Lancet. 2012; 380:651-659.
4. Ortega HG, Liu MC, Pavord ID, et al. Mepolizumab treatment in patients with severe eosinophilic asthma. N Engl J Med. 2014; 371:1198-1207.
5. Castro M, Zangrilli J, Wechsler ME, et al. Reslizumab for inadequately controlled asthma with elevated blood eosinophil counts: results from two multicentre, parallel, double-blind, randomised, placebo-controlled, phase 3 trials. Lancet Respir Med 2015; 3:355-366.

CTS: A Community of Mentors

"The one thing I am looking forward to is watching the talented people we have the opportunity to work with grow and accomplish more than their teachers. That is why we do this." Dr. Michael Peterson:

Formative;

Inspiring;

Life Changing;

Illuminating.

A great mentor is all of these things and more. The need for mentorship does not diminish as we advance through our careers. Indeed, our colleagues come to play an ever more critical role in our professional and personal well-being as we navigate life's paths and transitions. Being a member of CTS makes you a part of a vibrant community of clinicians, scientists and health professionals who are dedicated to making not just our state, but our world a better place Join CTS. Together, we can be better and do more.

Join CTS. Be a part of our community of mentors. For more information, please visit:
https://calthoracic.org/membership/

Who's Who in CTS

The Shaping of UCSF-Fresno: Meet Dr. Michael Peterson

By Vipul Jain, MD

While everyone at UCSF-Fresno works hard to contribute in their own diverse ways, all unanimously agree that the growth in the last decade and a half has skyrocketed under the stellar leadership of Michael (Mike) Peterson with an incredible amount of multidimensional progress in the pulmonary division.

Dr. Michael Peterson received his medical degree from the University of Minnesota and completed his residency in Internal Medicine at the University of Wisconsin and a fellowship in Pulmonary and Critical Care Medicine at the University of Iowa; where he joined the faculty in 1986. While at the University of Iowa, he was promoted to the Dr. William and Sondra Myers Professorship with tenure. Dr. Peterson has always had a passion for teaching. As Fellowship Program Director in Pulmonary and Critical Care Medicine at Iowa and also the Curriculum Director for University of Iowa School of Medicine, he trained and mentored many of the current leaders in our medical community. "My first rotation as a first year pulmonary fellow at the University of Iowa was in bronchoscopy lab; my attending was Mike Peterson and he clearly and emphatically communicated the Do's and Dont's. For the first time, I felt fear and I learned more that month than in the entire previous year" says Dr. Joseph Zabner, Division director at the University of Iowa. Dr. Zabner says "Throughout the years, as I teach pulmonary fellows; I find myself quoting Mike. The balance of fear, caring, humor, knowledge, and organization made Dr. Peterson a fantastic fellowship director and one of my mentors."

In 2002, Dr. Peterson was recruited to the University of California (San Francisco) Fresno Medical Education Program as the Valley Medical Foundation Professor of Medicine, UCSF Fresno Chief of Medicine and UCSF Vice-Chair of Medicine.

During his tenure in UCSF-Fresno, where he currently serves as the Associate Dean, Mike has led the growth of the Medicine residency from 45 trainees to its current 64 trainees. A master clinician himself, he has devoted his career to improving the educational environment for residents-in-training, bringing innovation to training models and increasing training opportunities for residents. Unfazed by setbacks, he spearheaded the development of 7 subspecialty fellowships programs at UCSF-Fresno with 35 current fellows. He has been a recipient of many prestigious awards including the University of Iowa's Presidential Award for Technology Innovation, UCSF Kaiser Teaching Award, and the UCSF Fresno Faculty Teaching and Faculty Research Award.

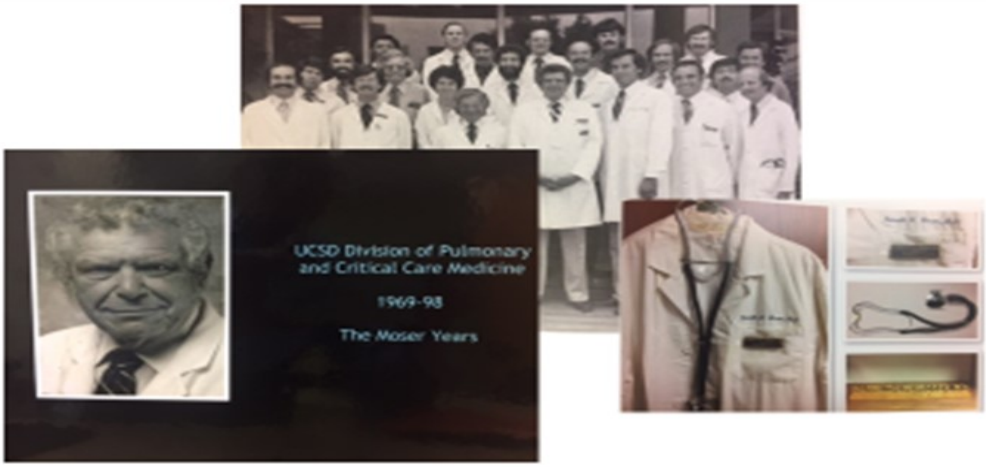
He has been elected to the Haile Debas UCSF Academy of Medical Educators and also received the ATS's Presidential Commendation. To Dr. Peterson, research is something that comes naturally. His research is highly collaborative and diverse, and he has published nearly 100 papers in peer reviewed journals. In addition to having attracted several million dollars in research grants and contracts, Mike led the fund-raising effort to expand the UCSF Fresno Clinical Research Center.

Mike enjoys recreational motorcycle riding and canoeing. “He has great talent in building cedar strip canoes; far less talent in selecting the driver of the cars to which they are attached” jokes his friend and colleague Dr. Thomas Gross, Professor at University of Iowa. He and his wife Barbara love to travel and visit their grandsons. “The one thing I am looking forward to is watching the talented people we have the opportunity to work with grow and accomplish more than their teachers. That is why we do this” says Dr. Peterson.

Mike’s contributions to CTS have led to the establishment of a modern, successful professional state thoracic society that is a national model for meeting the needs of pulmonary clinicians and scientists and leading advocacy and educational efforts for its members and the community.

What’s Going On in California

UCSD Ken Moser Yearbook:



As many of you know, the UCSD Pulmonary Division was founded and led with great distinction by Dr. Kenneth Moser for nearly 30 years until his untimely passing. For those who trained and worked in the UCSD Pulmonary Division under Ken Moser, one of the highlights was the annual Division photo taken outside the old main entrance of UCSD Medical Center on Dickinson Street. Now, with the help of several UCSD Pulmonary “old-timers,” we have managed to collect all of these pictures, identify almost all of the individuals – though with less than perfect certainty – and produce a yearbook with available pictures from 1969-98.

If you are interested in a pictorial history of the Pulmonary Division during the “Moser Years”, thanks to the generosity of Atul Malhotra, the current Division Director, we are able to make this priceless work of questionable art available at NO COST. If you are so inclined, and wish to remember and honor Dr. Moser’s vision and dream of a Lung Center at UCSD, you are welcome to make a donation to a fund the Division has created to establish the Kenneth Moser Lung Center in our new outpatient facility in La Jolla (https://giveto.ucsd.edu/ - type in “lung center”). There is absolutely no obligation, but you are welcome to contact Dr. Malhotra directly if you have any questions about this initiative.

Additionally, in order to personalize and provide some color commentary for these sterile pictures, we would welcome brief stories or anecdotes you may have about any of the individuals in these pictures. We all have some memories to share that may be of interest to others. We promise to compile them, with appropriate editing to satisfy censors, and make them available as a companion to the picture yearbook. We also welcome other suggestions about commemorating the Moser/ Pulmonary memory at UCSD.

If you wish to obtain a copy of the yearbook, please send an email with an appropriate mailing address to aries@ucsd.edu.

Thanks and best wishes.

Andy Ries (aries@ucsd.edu)
Atul Malhotra (amalhotra@ucsd.edu)

California Society for Respiratory Care Update

by Mike Madison

The California Society for Respiratory Care Annual Meeting was held at Harrah's Southern California Resort & Casino, June 13 – 15, 2017. The conference was well attended by 600+ California RCPs as well as representatives of 50+ vendor exhibitors. The program included general sessions and four tracks; Adult Critical Care, Neonatal/Pediatric, Sleep and Diagnostics. The range of topics covered e-cigarettes, High Flow Oxygen Therapy, mechanical ventilation strategies, inhaled medication and gas therapies, Volumetric CO2, x-ray interpretation, sleep diagnostics and PFT interpretation.

One presentation of particular interest to attendees was the newly created CSRC Safe Staffing Position Statement and White Paper, given by by Richard Ford (UC San Diego). In 2016, the Respiratory Care Board, aware of increasing complaints from practitioners and department managers regarding staffing shortages asked the CSRC to develop a set of Safe Staffing Guidelines that the RCB could reference in rendering opinions and that others could use as a guideline in developing safe staffing models in the provision of Respiratory Care. Concerns included the potential harm to patients, and staffing models in some care settings in which respiratory care was being rendered by non-qualified individuals.

In his presentation, Ford highlighted key components of the 11-point staffing statement, including the pitfalls of including only billable procedures and the importance of accounting for non-billable procedures such as transports, code response, rapid response, patient evaluation/assessment…all of which are essential to good patient care and mandate significant practitioner time at the bedside. Ford also discussed the importance of insuring RCPs add value in everything they do, including the provision of protocol driven care. The elimination of care that is not medically necessary, as well as insuring the care provided is evidence based is a key strategy in insuring that there are adequate numbers of competent respiratory care practitioners. The CSRC position statement , The result was a position statement, white paper, an interactive annotated bibliography and other resources can be found at http://www.csrc.org/page-1211546
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California Society for Pulmonary Rehabilitation

by Aimee Kizziar, RRT-NPS, BA, MHAL, UC Davis

I would like to invite you to mark your calendar for next year's conference titled *'Practical Application in Pulmonary Rehabilitation'.* The conference will be held at the Best Western Island Palms in San Diego on May 16-18, 2018. Of note, American Thoracic Society International Conference organized by American Thoracic Society (ATS) will be held May 18 - 23, 2018 in San Diego right after the CSPR conference ends. We are hoping to have 3 to 5 international speakers and 9 to 11 national speakers. Approximately 1/3 of this years attendees were relatively new to the field of PR hence our focus on practical applications. For more information, please see cspr.org.

Have You Gone Electric? Help Us Get More Health Professionals Plugged In!

The American Lung Association is still looking for health professionals who drive electric vehicles to talk about the health benefits of zero emission vehicles and share a photo of yourself with your EV. If you know a doctor, nurse or respiratory therapist who drives an electric or hybrid vehicle and would be interested in our campaign, please contact Ryan Endean at 916-585-7666 or email at Ryan.Endean@lung.org.

Southwestern Journal of Pulmonary and Critical Care Medicine

Volume 14, Issue 6							
Title (Click on title to be taken to the manuscript, **CME in Bold**)	**Journal Section**	**First Author**	**Year**	**Vol**	**Issue**	**Pages**	**Date Posted**
The Unspoken Challenges to the Profession of Medicine	Editorial	Boudi FB	2017	14	6	322-4	6/30/17
Medical Image of the Week: Superior Sulcus Tumor with Neural Invasion	Imaging	Cassidy S	2017	14	6	320-21	6/28/17
Mortality Rate Will Likely Increase Under Senate Healthcare Bill	News	Robbins RA	2017	14	6	318-9	6/27/17
Medical Image of The Week: Urothelial Carcinoma with Pulmonary	Imaging	Jarrett B	2017	14	6	315-7	6/21/17
Metastases Presenting with Shoulder Pain							
EMR Fines Test Trump Administration's Opposition to Bureaucracy	Editorial	Robbins RA	2017	14	6	312-4	6/17/17
University of Arizona-Phoenix Receives Full Accreditation	News	Robbins RA	2017	14	6	311	6/15/17
Medical Image of the Week: Spontaneous Pneumothorax in End Stage	Imaging	Altisheh R	2017	14	6	308-10	6/14/17
Fibrotic Lung Disease							
High-Sensitivity Troponin I and the Risk of Flow Limiting Coronary Artery	Critical Care	Abdul Jabbar A	2017	14	6	296-307	6/13/17
Disease in Non-ST Elevation Acute Coronary Syndrome (NSTE-ACS)							
Limited Choice of Obamacare Insurers in Some Parts of the Southwest	News	Robbins RA	2017	14	6	295	6/12/17
Breaking the Guidelines for Better Care	Editorial	Robbins RA	2017	14	6	292-4	6/10/17
Correlation between the Severity of Chronic Inflammatory Respiratory	Pulmonary	Pak SC	2017	14	6	285-91	6/9/17
Disorders and the Frequency of Venous Thromboembolism: Meta-Analysis							
Medical Image of the Week: Saber Sheath Trachea	Imaging	Low S-W	2017	14	6	283-4	6/7/17
May 2017 Phoenix Pulmonary/Critical Care Journal Club	Pulmonary Journal Club	Raschke RA	2017	14	6	279-82	6/4/17
June 2017 Imaging Case of the Month	**Imaging**	**Gotway MB**	**2017**	**14**	**6**	**269-78**	**6/3/17**
June 2017 Critical Care Case of the Month	**Critical Care**	**Fountain S**	**2017**	**14**	**6**	**262-8**	**6/2/17**
June 2017 Pulmonary Case of the Month	**Pulmonary**	**Horsley R**	**2017**	**14**	**6**	**255-61**	**6/1/17**

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