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Assembly on Environmental, Occupational, and Population Health Newsletter

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EOPH

Web Editorial Committee

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Dear EOPH members,

In this November issue of the EOPH newsletter, we share some of our members' recent "epub ahead of print" articles as well as other recent accomplishments by members in our assembly and fields. If you would like to keep up-to-date on the newest articles being published by our members and colleagues in the field, consider following us on Twitter ([@ATS_EOPH](https://twitter.com/ATS_EOPH)) and Facebook ([@ATS.EOPH](https://www.facebook.com/ATS.EOPH)).

Do you have a topic you would like to hear more about or a journal article that you would like to hear discussed? Send all ideas/announcements to tara.nordgren@medsch.ucr.edu.

Sincerely,

Your Web Editorial Committee



Recent publications

This section highlights some of our assembly members' exciting research that was recently 'e-published.' It is possible that our search may miss your best work, so please send your recent publications to tara.nordgren@medsch.ucr.edu.

Air Pollution and Environmental Aerosol Exposures

[Wood Smoke Exposure Alters Human Inflammatory Responses to Viral Infection in a Sex-Specific Manner: A Randomized, Placebo-Controlled Study.](#) Rebuli ME, Speen AM, Martin EM, Addo KA, Pawlak EA, Glista-Baker E, Robinette C, Zhou H, Noah TL, **Jaspers I**. Am J Respir Crit Care Med. 2018 Oct 26. doi: 10.1164/rccm.201807-1287OC. [Epub ahead of print] PMID: 30360637

[Monitoring and Modeling of Household Air Quality Related to Use of Different Cookfuels in Paraguay.](#) Tagle M, Pillarisetti A, Hernandez MT, Troncoso K, Soares A, Torres R, Galeano A, Oyola P, **Balmes J**, Smith KR. Indoor Air. 2018 Oct 19. doi: 10.1111/ina.12513. [Epub ahead of print] PMID:30339298

[Recent exposure to particle radioactivity and biomarkers of oxidative stress and inflammation: The Framingham Heart Study.](#) Li W, Nyhan MM, Wilker EH, Vieira CLZ, Lin H, Schwartz JD, Gold DR, Coull BA, Aba AM, Benjamin EJ, Vasan RS, Koutrakis P, Mittleman MA. Environ Int. 2018 Oct 27. pii: S0160-4120(18)31534-4. doi: 10.1016/j.envint.2018.10.039. [Epub ahead of print] PMID:30376999

[An algorithm for quantitatively estimating non-occupational pesticide exposure intensity for spouses in the Agricultural Health Study.](#) Deziel NC, Beane Freeman LE, Hoppin JA, Thomas K, Lerro CC, Jones RR, Hines CJ, Blair A, Graubard BI, Lubin JH, Sandler DP, Chen H, Andreotti G, Alavanja MC, Friesen MC. J Expo Sci Environ Epidemiol. 2018 Oct 30. doi: 10.1038/s41370-018-0088-z. [Epub ahead of print] PMID:30375516

Asthma and Allergy

[Gene Coexpression Networks in Whole Blood Implicate Multiple Interrelated Molecular Pathways in Obesity in People with Asthma.](#) Croteau-Chonka DC, Chen Z, Barnes KC, Barraza-Villarreal A, Celedón JC, Gauderman WJ, Gilliland FD, Krishnan JA, Liu AH, London SJ, Martinez FD, Millstein J, Naureckas ET, Nicolae DL, White SR, Ober C, Weiss ST, Raby BA. Obesity (Silver Spring). 2018 Oct 25. doi: 10.1002/oby.22341. [Epub ahead of print] PMID: 30358166

[AAAAI Response to the EAACI/GA²LEN/EDF/WAO Guideline for the Definition, Classification, Diagnosis and Management of Urticaria 2017 Revision.](#) Wood RA, Khan DA, Lang DM, Fasano MB, Peden DB, Busse PJ, Carter MC, Demain JG, Dinakar C, Grayson MH, Markovics SB, Sicherer SH, Stone KD, Sullivan KE, Williams PV, Fleisher TA, Casale TB. Allergy. 2018 Oct 18. doi: 10.1111/all.13636. [Epub ahead of print] No abstract available. PMID:30338538

[Equine asthma: Integrative biologic relevance of a recently proposed nomenclature.](#) Bond S, Léguillette R, Richard EA, **Couetil L**, Lavoie JP, Martin JG, Pirie RS. J Vet Intern Med. 2018 Oct 7. doi: 10.1111/jvim.15302. [Epub ahead of print] Review. PMID: 30294851

Interstitial Lung Disease and Pulmonary Fibrosis

[MUC5B Promoter Variant and Rheumatoid Arthritis with Interstitial Lung Disease.](#) Juge PA, Lee JS, Ebstein E, Furukawa H, Dobrinskikh E, Gazal S, Kannengiesser C, Ottaviani S, Oka S, Tohma

S, Tsuchiya N, Rojas-Serrano J, González-Pérez MI, Mejía M, Buendía-Roldán I, Falfán-Valencia R, Ambrocio-Ortiz E, Manali E, Papis SA, Karageorgas T, Boumpas D, Antoniou K, van Moorsel CHM, van der Vis J, de Man YA, Grutters JC, Wang Y, Borie R, Wemeau-Stervinou L, Wallaert B, Flipo RM,

Nunes H, Valeyre D, Saidenberg-Kermanac'h N, Boissier MC, Marchand-Adam S, Frazier A, Richette P, Allanore Y, Sibilia J, Dromer C, Richez C, Schaevebeke T, Lioté H, Thabut G, Nathan N, Amselem S, Soubrier M, Cottin V, Clément A, Deane K, Walts AD, Fingerlin T, Fischer A, Ryu JH, Matteson EL, Niewold TB, Assayag D, Gross A, Wolters P, Schwarz MI, Holers M, Solomon JJ, Doyle T, Rosas IO, Blauwendraat C, Nalls MA, Debray MP, Boileau C, Crestani B, **Schwartz DA**, Dieudé P. *N Engl J Med*. 2018 Oct 20. doi: 10.1056/NEJMoa1801562. [Epub ahead of print] PMID:30345907

[Metal-Induced Pulmonary Fibrosis](#). **Assad N, Sood A**, Campen MJ, Zychowski KE. *Curr Environ Health Rep*. 2018 Oct 8. doi: 10.1007/s40572-018-0219-7. [Epub ahead of print] Review. PMID:30298344

Cellular Mechanisms and Preclinical Models of Exposure

[MyD88 controls airway epithelial Muc5ac expression during TLR activation conditions from agricultural organic dust exposure](#). Dickinson JD, Sweeter JM, Staab EB, Nelson AJ, Bailey KL, Warren K, Jaramillo AM, Dickey BF, Poole JA. *Am J Physiol Lung Cell Mol Physiol*. 2018 Oct 25. doi: 10.1152/ajplung.00206.2018. [Epub ahead of print] PMID:30358438

[Repeated pulmonary exposures to zinc ions enhance inflammatory responses to subsequent metal exposures](#). Watson-Wright C, Queiroz P, Rodrigues S, Donaghey TC, Brain JD, Molina RM. *Exp Lung Res*. 2018 Oct 8:1-10. doi: 10.1080/01902148.2018.1517837. [Epub ahead of print] PMID:30295553

[An association between MMP-9 and impaired T cell migration in ethanol-fed BALB/c mice infected with Respiratory Syncytial Virus-2A](#). Warren KJ, Poole JA, Sweeter JM, DeVasure JM, Wyatt TA. *Alcohol*. 2018 Oct 3. pii: S0741-8329(18)30169-1. doi: 10.1016/j.alcohol.2018.09.009. [Epub ahead of print] PMID:30291948

[Loss of cAMP-dependent stimulation of isolated cilia motility by alcohol exposure is oxidant dependent](#). Price ME, Gerald CL, Pavlik JA, Schlichte SL, Zimmerman MC, Devasure JM, Wyatt TA, Sisson JH. *Alcohol*. 2018 Oct 3. pii: S0741-8329(18)30170-8. doi: 10.1016/j.alcohol.2018.09.010. [Epub ahead of print] PMID:30291947

Neurologic and Psychiatric Disorders

[Vagal Nerve Stimulation for Epilepsy in Adults: A Database Risk Analysis and Review of the Literature](#). Selner AN, Rosinski CL, Chiu RG, Rosenberg D, Chaker AN, Drammeh H, Esfahani DR, Mehta AI. *World Neurosurg*. 2018 Oct 13. pii: S1878-8750(18)32339-8. doi: 10.1016/j.wneu.2018.10.043. [Epub ahead of print] PMID:30326313

[Transcranial Photobiomodulation for the Treatment of Major Depressive Disorder. The ELATED-2 Pilot Trial](#). **Cassano P**, Petrie SR, Mischoulon D, Cusin C, Katnani H, Yeung A, De Taboada L, Archibald A, Bui E, Baer L, Chang T, Chen J, Pedrelli P, Fisher L, Farabaugh A, Hamblin MR, Alpert JE, Fava M, Iosifescu DV. *Photomed Laser Surg*. 2018 Oct 20. doi: 10.1089/pho.2018.4490. [Epub ahead of print] PMID:30346890

Genetics/Genomics

[Integrative Genomics Analysis Identifies ACVR1B as a Candidate Causal Gene of Emphysema Distribution](#). Boueiz A, Pham B, Chase R, Lamb A, Lee S, Naing ZZC, Cho MH, Parker MM, Sakornsakolpat P, Hersh CP, Crapo JD, Stergachis AB, Tal-Singer R, DeMeo DL, Silverman EK,

Zhou X, Castaldi PJ; COPDGene investigators. Am J Respir Cell Mol Biol. 2018 Oct 18. doi: 10.1165/rcmb.2018-0110OC. [Epub ahead of print]

Chronic Obstructive Pulmonary Disease (COPD)

[Imaging Advances in Chronic Obstructive Pulmonary Disease: Insights from COPDGene.](#) Bhatt SP, Washko GR, Hoffman EA, Newell JD Jr, Bodduluri S, Diaz AA, Galban CJ, Silverman EK, San José Estépar R, Lynch DA; COPDGene Investigators.

Am J Respir Crit Care Med. 2018 Oct 10. doi: 10.1164/rccm.201807-1351SO. [Epub ahead of print] PMID:30304637

Telemedicine

[Developing Telemental Health Partnerships Between State Medical Schools and Federally Qualified Health Centers: Navigating the Regulatory Landscape and Policy Recommendations.](#)

Fortney JC, Veith RC, Bauer AM, Pfeiffer PN, Valenstein M, Pyne JM, Dalack GW, Kramer TL, Ferro LJ, Metzger K, Shore JH, Carlo AD, Coates S, Ward-Jones S, Larkins E, Hafer E, Shushan S, Weaver DL, Unützer J. J Rural Health. 2018 Oct 4. doi: 10.1111/jrh.12323. [Epub ahead of print]

PMID:30288797

Prenatal Exposures

[Prenatal high molecular weight phthalates and bisphenol A, and childhood respiratory and allergic outcomes.](#) Berger K, Eskenazi B, **Balmes J**, Kogut K, Holland N, Calafat AM, Harley KG. Pediatr Allergy Immunol. 2018 Oct 18. doi: 10.1111/pai.12992. [Epub ahead of print] PMID:30338578

[When the Fetus is Exposed to Smoke, the Developing Lung is Burned.](#) Balmes JR. Am J Respir Crit Care Med. 2018 Oct 1. doi: 10.1164/rccm.201809-1698ED. [Epub ahead of print] No abstract available. PMID:30272992

[A Prospective Cohort Study Examining the Association Between Maternal Arsenic Exposure, Fetal Loss, and Neonatal Mortality.](#) Ahmed SM, Noble BN, Joya SA, Hasan OS, Lin PI, Rahman ML,

Mostofa G, Quamruzzaman Q, Rahman M, Christiani DC, Kile ML. Am J Epidemiol. 2018 Oct 24. doi: 10.1093/aje/kwy243. [Epub ahead of print] PMID:30358819

Occupational Exposures, Health, and Mechanisms

[Airway Exposure to Modified Multi-walled Carbon Nanotubes Perturbs Cardiovascular Adenosinergic Signaling in Mice.](#) Thompson LC, Sheehan NL, Walters DM, Lust RM, **Brown JM**,

Wingard CJ. Cardiovasc Toxicol. 2018 Oct 31. doi: 10.1007/s12012-018-9487-6. [Epub ahead of print]

PMID:30382549

[Role of Diabetes Management in Occupational Health: Perceptions and Practices of Occupational and Environmental Medicine Providers.](#) VanDam I, Dai J, **Rosenman K**. J Occup Environ Med. 2018 Oct 26. doi: 10.1097/JOM.0000000000001488. [Epub ahead of print] PMID:30371550

[Occupational Exposures Influence CT Imaging Characteristics in the SPIROMICS Cohort.](#) **Paulin**

LM, Smith BM, Koch A, Han M, Hoffman EA, Martinez C, Ejike C, Blanc PD, Rous J, Barr RG, Peters SP, Paine R 3rd, Pirozzi C, Cooper CB, Dransfield MT, Comellas AP, Kanner RE, Drummond MB, Putcha N, Hansel NN. Ann Am Thorac Soc. 2018 Oct 19. doi: 10.1513/AnnalsATS.201802-150OC. [Epub ahead of print] PMID:30339479

[Greater Odds for Angina in Uranium Miners than Non-uranium Miners in New Mexico.](#)

Rashida VJMA, Wang X, Myers OB, Boyce TW, Kocher E, Moreno M, Karr R, **Assad N**, Cook

LS, **Sood A**. J Occup Environ Med. 2018 Oct 17. doi: 10.1097/JOM.0000000000001482. [Epub ahead of print] PMID:30335677

[A field evaluation of a single sampler for respirable and inhalable indium and dust measurements at an indium-tin oxide manufacturing facility.](#) Hawley B, Gibbs JL, Cummings K, Stefaniak AB, Park JY, Stanton M, Virji MA. J Occup Environ Hyg. 2018 Oct 16;1-30. doi: 10.1080/15459624.2018.1536826. [Epub ahead of print] PMID: 30325716

[Mixed-dust pneumoconiosis: Review of diagnostic and classification problems with presentation of a work-related case.](#) Baur X, Sanyal S, Abraham JL. Sci Total Environ. 2018 Oct 12;652:413-421. doi: 10.1016/j.scitotenv.2018.10.083. [Epub ahead of print] PMID:30368172

[Chronic Exposure to Solvents Among Construction Painters: Reductions in Exposure and Neurobehavioral Health Effects.](#) Fiedler N, Weisel C, Nwankwo C, **Kipen H**, Lange G, Ohman-Strickland P, **Laumbach R**. J Occup Environ Med. 2018 Oct 10. doi: 10.1097/JOM.0000000000001470. [Epub ahead of print] PMID:30308619

[Occupation and task as risk factors for asthma-related outcomes among healthcare workers in New York City.](#) Caridi MN, Humann MJ, Liang X, Su FC, Stefaniak AB, LeBouf RF, Stanton ML, Virji MA, Henneberger PK. Int J Hyg Environ Health. 2018 Oct 13. pii: S1438-4639(18)30397-3. doi: 10.1016/j.ijheh.2018.10.001. [Epub ahead of print] PMID:30327176

[Agriculture Occupational Exposures and Factors Affecting Health Effects.](#) Nordgren TM, Charavaryamath C. Curr Allergy Asthma Rep. 2018 Oct 5;18(12):65. doi: 10.1007/s11882-018-0820-8. Review. PMID:30291457

Cigarettes, E-Cigarettes, Cigarillos and Tobacco Smoke Exposures

[Radiolabeling an Electronic Cigarette Aerosol Using Technetium Carbon Ultrafine Particles.](#) Holbrook LT, Zeman KL, Burke A, **Jaspers I**, Bennett WD. J Aerosol Med Pulm Drug Deliv. 2018 Oct 30. doi: 10.1089/jamp.2017.1442. [Epub ahead of print] PMID: 30376396

[Formation of flavorant-propylene Glycol Adducts With Novel Toxicological Properties in Chemically Unstable E-Cigarette Liquids.](#) Erythropel HC, Jabba SV, DeWinter TM, Mendizabal M, Anastas PT, Jordt SE, Zimmerman JB. Nicotine Tob Res. 2018 Oct 18. doi: 10.1093/ntr/nty192. [Epub ahead of print] PMID:30335174

Cancer

[Dynamins impacts homology-directed repair and breast cancer response to chemotherapy.](#) Chernikova SB, Nguyen RB, Truong JT, Mello SS, Stafford JH, Hay MP, Olson A, Solow-Cordero DE, Wood DJ, Henry S, von Eyben R, Deng L, Gephart MH, Aroumougame A, Wiese C, Game JC, Györfy B, **Brown JM**. J Clin Invest. 2018 Oct 29. pii: 87191. doi: 10.1172/JCI87191. [Epub ahead of print] PMID:30371505

[Trends in lung cancer and cigarette smoking: California compared to the rest of the United States.](#) Pierce JP, Shi Y, McMenamin SB, Benmarhnia T, Trinidad DR, Strong DR, White MM, Kealey S, Hendrickson EM, Stone MD, Villaseñor A, Kwong S, Zhang X, Messer K. Cancer Prev Res (Phila). 2018 Oct 10. pii: canprevres.0341.2018. doi: 10.1158/1940-6207.CAPR-18-0341. [Epub ahead of print] PMID:30305281

Therapeutics, Clinical Trials, and Clinical Care

[Identification of Acute Kidney Injury Sub-phenotypes with Differing Molecular Signatures and Response to Vasopressin Therapy.](#) Bhatraju PK, Zelnick LR, Herting J, Katz R, Mikacenic C,

Kosamo S, Morrell ED, Robinson-Cohen C, Calfee CS, Christie JD, Liu KD, Matthay MA, Hahn WO, Dmyterko V, Slivinski NSJ, Russell JA, Walley KR, Christiani DC, Liles WC, Himmelfarb J, Wurfel MM. *Am J Respir Crit Care Med*. 2018 Oct 18. doi: 10.1164/rccm.201807-1346OC. [Epub ahead of print] PMID:30334632

[Are the metabolic benefits of resistance training in type 2 diabetes linked to improvements in adipose tissue microvascular blood flow?](#) Hu D, Russell RD, Remash D, Greenaway T, Rattigan S, Squibb KA, Jones G, **Ross RM**, Roberts CK, Premilovac D, Richards SM, Keske MA. *Am J Physiol Endocrinol Metab*. 2018 Oct 23. doi: 10.1152/ajpendo.00234.2018. [Epub ahead of print] PMID:30351988

Terrorism and Inhalational Disasters Section Updates



Dr. Sven Jordt, Ph.D. presented “Chlorine Inhalation Injury: Targets, Biomarkers and Countermeasures” at the 2nd meeting of the Temporary Working Group on Investigative Science and Technology, held at the Organization for the Prohibition of Chemical Weapons (OPCW) in The Hague, The Netherlands from 14th to 16th November 2018. Dr. Jordt is currently serving as Chair of the TID section.

Recent Publications Relevant to the TID Section

[Methyl isocyanate inhalation induces tissue factor-dependent activation of coagulation in rats.](#) Rancourt RC, Rioux JS, Veress LA, Garlick RB, Crouch CR, Peters E, Sosna W, White CW. *Drug Chem Toxicol*. 2018 Nov 14:1-7. doi: 10.1080/01480545.2018.1517773. [Epub ahead of print] PMID:30426789

[Population Health Adaptation Approaches to the Increasing Severity and Frequency of Weather-Related Disasters Resulting From our Changing Climate: A Literature Review and Application to Charleston, South Carolina.](#) Runkle J, Svendsen ER, Hamann M, Kwok RK, Pearce J. *Curr Environ Health Rep*. 2018 Nov 8. doi: 10.1007/s40572-018-0223-y. [Epub ahead of print] Review. PMID:30406894

[Bromine-inhalation mimics ischemia-reperfusion cardiomyocyte injury and calpain activation in rats.](#) Ahmad S, Masjoan Juncos JX, Ahmad A, Zaky A, Wei CC, Bradley W, Zafar I, Powell P, Mariappan N, Vetal N, Louch WE, Ford DA, Doran S, Matalon S, Dell'Italia LJ. *Am J Physiol Heart Circ Physiol*. 2018 Oct 31. doi: 10.1152/ajpheart.00652.2017. [Epub ahead of print] PMID:30379573

[A mass spectrometric platform for the quantitation of sulfur mustard-induced nucleic acid adducts as mechanistically relevant biomarkers of exposure.](#) Zubel T, Hochgesand S, John H, Steinritz D, Schmidt A, Bürkle A, Mangerich A. *Arch Toxicol*. 2018 Oct 15. doi: 10.1007/s00204-018-2324-7. [Epub ahead of print] PMID:30324314

To include your publications, news articles, or presentations pertinent to TID section in the future EOPH newsletters, please email your content to Satya Achanta, DVM, PhD (satya.achanta@duke.edu), Web Director of TID section.

In Memory: Dr. Margot Becklake McGregor

(Provided by Dr. Maurice McGregor via Dr. Sonia Buist): On October 17th 2018, Dr. Margot Becklake McGregor died peacefully in her home. She will be missed by her family, her husband Maurice, her children, James (Marie-José LeBlanc) and Margaret (John Price), her grandchildren Dominique, Thomas, Mae, Charlotte and her great-granddaughter Margot. She will be remembered as a physician, teacher, eminent researcher and above all mentor and role model to many people in many countries. Dr.



Becklake grew up in South Africa, studied medicine in Johannesburg and after postgraduate training in London, worked at the University of the Witwatersrand and the Miners Silicosis Bureau where she studied the effects of dust inhalation on workers in the gold mines. In 1957 she immigrated with her family to Montréal and worked at McGill University in the Departments of Medicine and Epidemiology, the Montreal Chest Hospital and the Royal Victoria Hospital. Her widely published research brought her international recognition. Her numerous awards include the Order of Canada and the Order of Québec. See https://en.m.wikipedia.org/wiki/Margaret_Becklake.

-Maurice, Margaret and James

Dr. Becklake's Obituary can be found [here](#).

Success in the efforts of ICOH and others to include occupationally exposed workers in UN TB Declaration

Dr. Rafael E. de la Hoz, chair of the Scientific Committee on Respiratory Disorders for ICOH, an international society of occupational physicians has provided news of a critical success in efforts to include occupationally exposed workers and workplace preventive measures in the United Nations Tuberculosis Declaration. As described by Dr. de la Hoz:

[ICOH] and other organizations recently succeeded in achieving inclusion of occupationally exposed workers and using occupational preventive measures into the UN Declaration on Tuberculosis. You can find the document at <http://www.stoptb.org/webadmin/cms/docs/Political-Declaraion-on-the-Fight-against-Tuberculosis.pdf>. Representatives of ICOH and other organizations attended the September 26, 2018 United Nations General Assembly Meeting on Tuberculosis (TB) in New York City, where, after a lengthy and tedious process, the UN Political Declaration on TB "United to End Tuberculosis: An Urgent Global Response to a Global Epidemic" was endorsed. Through the combined efforts of ICOH, IOHA, and other organizations, the suggested occupationally-related language was successfully added to this endorsed Declaration. Specifically, you can see that Paragraph 17 of the document identifies "health

care workers, miners and others exposed to silica” as high-risk vulnerable groups. Also, Paragraph 31 states: “Commit to... implementing primary prevention in high-risk occupations by reducing silica dust exposures in mining, construction and other dusty workplaces, and worker tuberculosis surveillance and infection prevention and control in healthcare settings”.

The Statements and endorsers, including ATS, are located at <http://www.icohweb.org/site/ICOH-TB-Statements.asp>.

In The News!

A recent publication in ATS’s Blue Journal ([Rebuli, et al. Am J Respir Crit Care Med. 2018](#)) with authorship including several EOPH Assembly members has been featured in numerous news outlets, including the KCBS radio station in San Francisco, [The UNC Health Care and UNC School of Medicine Newsroom](#), and [ScienceDaily](#). In this publication, titled, “Wood Smoke Exposure Alters Human Inflammatory Responses to Viral Infection in a Sex-specific Manner: A Randomized, Placebo-controlled Study,” authors identified differential immune responses to wood smoke exposure in men and women. Be sure to check out their important findings using the links above, and many thanks to the authors for sharing their work with us!

ATS Webinar Journal Club

We hope you had an opportunity to participate in the recent ATS Webinar Journal Club featuring the article, “Once –daily Single-inhaler Triple Versus Dual Therapy in Patients with COPD.” The Webinar was co-sponsored by the All and EOPH assemblies. If you were unable to participate live, there is still an opportunity to watch webinar, available [HERE](#).

Interesting Clinical Cases?

The web committee is currently calling for “Quick Hit” clinical cases, which will be posted on the website and highlighted in this newsletter. This is an excellent peer-reviewed writing opportunity for trainees. Submit clinical cases to tara.nordgren@medsch.ucr.edu.