American Society of Spine Radiology
Founded 1993

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THE MYELON

The newsletter for the members of the American Society of Spine Radiology

FROM THE PRESIDENT

Daniel T. D. Nguyen, M.D.

After so many years have passed, the ASSR's *The Myelon* Newsletter is back! In today's environment of electronic media, it is very easy to miss news with the fast cycle. We hope to provide this forum in regular quarterly intervals to highlight important news pertaining to the members of the American Society of Spine Radiology.

During this year's Annual Symposium in February at the beautiful Dana Point, we had a successful scientific and educational meeting led by Dr. Michele Johnson. In addition to our diverse Faculty members, we also had equally diverse presence of attendees outside of the Americas, including Asia, Africa, Europe, and Australia. We hope to build further relationships with these regions in the coming years. After a 10-year hiatus, the return of the Hands-on course was an eager moment that did not disappointed our Faculty and Attendees. Social events such as Golf outing and 5K fun Run/Walk were popular and fun.

Since then, the event of our lifetime, COVID-19 pandemic suddenly presented itself. In this issue, we have a personal experience from Dr. Amit Aggarwal and his Residents and Fellows in New York during their redeployment from Radiology to Internal Medicine. After reading this, you will agree with me how brave these individuals were to take on this challenge. With Personal Protective Equipment (PPE) shortages, the ASSR early on came together and released guidelines for spine procedure triage based on CMS guidelines.

Finally, with the growth of our society, we are pleased with the establishment of the inaugural ASSR Research Grant Request for Proposal under the leadership of Drs. Lubdha Shah and Peter Kranz. We hope this opportunity will aid a promising investigator to success in the future. Also, ASSR has established an Advocacy Committee. In this issue, Dr. Douglas Beall will give us a review of proposed change in LCD of Vertebral Augmentation.

As we are preparing to reopen our healthcare and economy, I wish you the best in personal and professional health in the months to come. Until next time...

Best regards,

Dan Nguyen, MD

An Insider's Look at the Impact of COVID-19

by Amit Aggarwal, M.D., Assistant Professor of Radiology, Icahn School of Medicine at Mount Sinai

New York City has been significantly impacted by the COVID-19 pandemic with a large number of cases within the 5 boroughs, especially Manhattan, Queens and Brooklyn. The Mount Sinai Health System has hospitals located within the 5 boroughs that were inundated with patients with a peak of over 2000 COVID-19 positive cases in early to mid April. I was so impressed by the level of dedication and altruism that was demonstrated during this difficult time by healthcare workers throughout our hospital system.

A number of our radiology residents and fellows volunteered for redeployment to clinical departments with all of them being sent to Internal Medicine floors and even to ICU settings to help with staffing.

This picture was taken during the redeployment of several of our Radiology residents to Internal Medicine overnight coverage (picture provided by Shingo Kihira, M.D.). From right to left, Shashidhara Murthy, M.D., Joseph Song, M.D., Shingo Kihira,

From my perspective, being in Manhattan during this time has been a transformative experience. The usual crowds and bustle have become less and less apparent as the government mandates for social distancing became more strict. Previously packed restaurants and bars are now quiet with skeleton crews left to fill delivery orders in an attempt to stay afloat. Once crowded streets are now mostly empty, save a handful of masked individuals taking a stroll to escape the ennui of social distancing. During the initial upslope and at the apex of the curve, the wail of ambulance sirens could be heard almost constantly through the days.

In the midst of all this, I am heartened to see New York City rally around its healthcare workers. Every day at 7PM, people open their apartment windows and cheer and applaud (and sometimes bang pots and pans) for several minutes as a tribute to healthcare workers. Restaurants have donated countless meals to hospitals. Businesses have donated and discounted goods for healthcare workers as a gesture of thanks for their work and sacrifice.

Left: One of our Radiology residents, Andy Hoang, M.D., wearing personal protecting equipment on the medicine floor during redeployment.

Below: Radiology residents Joseph Song, M.D. (left) and Shingo Kihira, M.D. during their redeployment to Internal Medicine nightfloat. (picture provided by Shingo Kihira, M.D.)

Medical staff during a meal break on the Medicine floor (picture provided by Shingo Kihira, M.D.)

We are all beginning to feel hopeful again as we seem to be on the downslope of the curve. One of the Mount Sinai nurses (Ugoeze Onyekelu-Eze, RN) shared an African proverb that expresses this feeling: No matter how long the night is, the morning is sure to come.

Reflections upon my redeployment to a COVID-19 unit

by Howard Dai, M.D., Neuroradiology Fellow, Icahn School of Medicine at Mount Sinai

Dr. Aggarwal asked one of his Neuroradiology Fellows, Howard Dai, M.D., to write about his experience during his redeployment, which is as follows:

Here's a thought: What would happen if a Radiologist had to practice clinical medicine again? I am a PGY-6 Neuroradiology fellow in New York City, and I was redeployed to take care of COVID-19 patients during the middle of the pandemic. Many people have asked me about my experience, and I wanted to share answers to some of my most frequently asked questions.

Q: What made you volunteer?

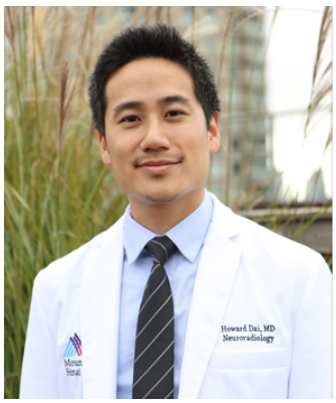
A: I wanted to help, and I felt like I was in a good position to do so. We have the same electronic medical record as was used during my Internal Medicine internship. I was fairly comfortable with the system which allowed me to adapt quickly to my time on the Medicine floors. I also live by myself and didn't have to worry about possibly spreading COVID-19 to any family members when I returned home.

Q: What kind of things did you have to do?

A: I was assigned to help cover nights on a Medicine floor, so I was mainly responsible for taking care of acute events. For example, if a patient became hypoxic while wearing a nonrebreather mask, I would make sure that mask was fitted properly, increase the flow rate, and/or attempt proning the patient. If I couldn't get the patient's oxygen to improve, I would have to call a respiratory therapist for help on starting the patient on a BiPAP or high-flow nasal canula. If the patient continued to do poorly, I would page the Rapid Response Team for possible intubation and transfer to the ICU.

Q: Did you have to relearn a bunch of medicine?

A: From a knowledge standpoint, I think many radiologists would be concerned about their ability to practice medicine safely if they were redeployed. I had this concern initially, but actually many of the issues that came up were very basic. For example, the nurse would call me to let me know the patient has a fever. Well, I am presuming this is related to the viral pneumonia, so yes we can give them Tylenol. Some things were slightly more advanced such as reading an EKG, but I still remember what atrial fibrillation or STEMI looks like. I also know how to check the QTc (conveniently written at the top), which was important because many patients were on hydroxychloroquine and azithromycin which I learned cause QT prolongation. Additionally, if I had any questions, there was always a medicine resident or Attending available for me to ask questions throughout the night.



Q: Were there a lot of deaths?

A: For about 25 patients, I encountered about 1 death every other day during my 12 hour shift. This is much more than I have encountered previously during my intern year.

Q: How did you mentally deal with patient deaths?

A: My first patient who died was in his 60's with numerous underlying medical issues. The worst part was having to tell the family. They wanted to know how he felt right before he died, and it was at this moment that I realized I could have done something. I was so focused on trying to save him, that I missed the chance to connect him with his family before he coded and allowed them to say goodbye. My second patient that passed away was in his 90's and was DNR/DNI. He only just arrived on the unit that night, but he looked quite sick. The Rapid Response physician thought he might code that very night. This time, I called his daughter on my cell phone, put the call on speaker, and went into his room so that she could talk to her father one last time. When I called the daughter a few hours later at 4 am to inform her that her father had passed away, it did not come as a surprise as she had accepted this possibility at the time of the initial phone call. Knowing that they had been able to speak prior to his passing really helped me cope with the situation.

Q: Did you clinically correlate?

A: Although my medical knowledge was very basic, I believe having a background in Radiology was immensely helpful and gave me tools that I wish I had when I was an intern. By reviewing a patient's chest imaging, I could tell the extent of pneumonia or extent of emphysema to anticipate how sick the patient was. In another case, the day team was wondering whether or not the patient had melena due to esophageal varices, and I could give the team a good guess just based on the patient's most recent CT abdomen. There was also a patient who had "altered mental

An important statement from the ASSR Executive Committee

"In recent weeks, we observed and are deeply troubled with the loss of Ahmaud Arbery, Breonna Taylor, Tom McDade, George Floyd, and countless additional African-American lives who died needlessly as the result of racism and injustice. We, the American Society of Spine Society (ASSR), see you, we hear you, we stand with you, and we are committed to promote equality, inclusivity, and diversity in our work as a society as well as, in our daily lives and in our health care practices. Our thoughts and committed support go out to all those affected and to our Global Community.

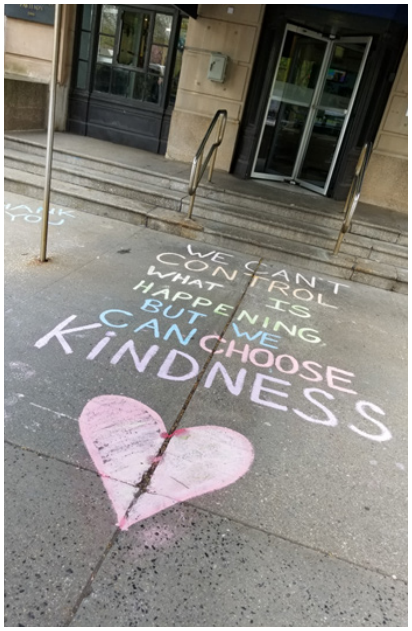
As we look ahead to our 2021 Annual Symposium, we will look for specific opportunities to support social justice, celebrate our diversity, foster inclusion, and we will call on all members of our society to help us as we work to realize this goal."

Reflections upon my redeployment *(continued)*

status" and it was unclear based on the notes whether or not they were truly A&Ox3 at baseline. Upon review of the patient's imaging, I realized I had interpreted the patient's CSF flow MRI a few months earlier in their evaluation for normal pressure hydrocephalus. Although not definitive, it certainly helped put things into perspective.

Going forward, this experience will definitely influence my career and outlook on life in a very positive way. I am grateful that there are physicians who are able to care for patients with complex medical problems. It was inspiring to see all the nurses, respiratory therapists, and other medical staff who worked continuously throughout the night and spent a great deal of time with COVID-19 patients.

Finally, this experience truly reminds me of how easily a life can be taken away and that it is important to be grateful for each day. I am also thankful to have a large support network of family and friends, and in particular my own parents and grandparents who immigrated here to raise me and give me the opportunity to become the person I am today.



Written in chalk on the ground outside of Mount Sinai Hospital at 1184 5th Avenue (picture by Amit Aggarwal, M.D.)

Inaugural ASSR Research Grant Award

The ASSR is very pleased to announce the inaugural ASSR Research Grant Award! The purpose of this endeavor is to fund research that advances the understanding, diagnosis and/or treatment of spinal pathologies and spine-focused comparative effectiveness research.

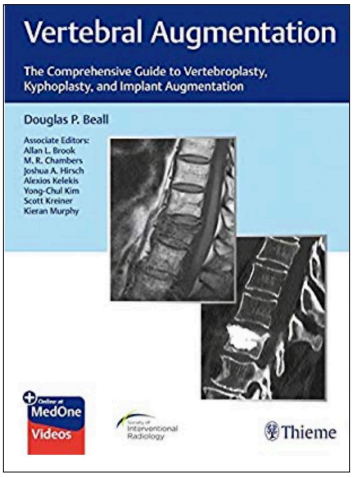
This seed grant will award up to $10,000 for a 1-year project to support the preliminary pilot phase of scientific projects. While faculty, fellows, and residents with an interest in spine are eligible, strong consideration will be given to applicants who are young investigators and for projects that have potential for subsequent grant applications to the NIH, other governmental agencies, and foundations.

Submissions are due September 1, 2020 and a limited number of finalists will be announced October 15. The finalists will present their proposal to the Seed Grant Committee at the annual ASSR symposium in New Orleans in February 2021. The committee will announce the winner shortly after the conclusion of the annual meeting.

The Request for Proposal was announced May 1 on the ASSR website, via an ASSR member email, as well as through various social media sites.

The definitive guide to performing vertebroplasty, kyphoplasty, and implant augmentation from national and international experts

Vertebral Augmentation has been the one of the core essence of ASSR membership from early on. It has been almost 15 years since the last book on this subject was written by one of our former ASSR Presidents, Dr. John Mathis. Recently, a new definite guide to perform vertebroplasty, kyphoplasty, and implant augmentation from national and international experts, friends or members of the ASSR. Written and edited by Douglas Beall along with associate editors Allan Brook, M. R. Chambers, Joshua Hirsch, Alexios Kelekis, Yong-Chul Kim, Scott Kreiner, and Kieran Murphy, this richly illustrated book presents a multidisciplinary and international perspective. It features contributions from renowned experts in interventional radiology, neurosurgery, pain medicine, and physiatry. This resource fills a gap in the literature, with extensive updates on a vast amount of new information and techniques that have been introduced during the past decade.



Key Features

- Procedural chapters cover vertebroplasty, sacroplasty, cervical and posterior arch augmentation, balloon kyphoplasty, and vertebral augmentation with implants and for challenging pathologies
- Special topics include radiation exposure and protection, post-procedure physical therapy, osteoporosis treatment, postural fatigue syndrome, the effect on morbidity and mortality, and cementoplasty outside the spine
- Treatment of complex cases are also discussed extensively, including chronic vertebral compression fractures, neoplastic vertebral compression fractures, instrumented spinal fusions, and severe benign and malignant fractures
- The final chapter features 16 subchapters from global masters of vertebral augmentation, with personal tips, tricks, and pearls they use in their own practices

The Vertebral Augmentation LCD: Potential Changes Initiated by the Medical Administrative Contractors

by Douglas P. Beall, M.D.

On March 20, 2019 a number of practitioners participated in a conference call led by the Medical Director for the NGS region for the purpose of updating the Local Coverage Determination (LCD) for vertebral augmentation and to go over the literature evidence for this treatment. There were numerous participants in the call who provided universally supportive evidence and expert opinion.

When that LCD was finally released in a process that had no additional input and no further commentary the final product looked nothing like the contents of the March discussion and had some very controversial changes and content that was completely unsupported by existing literature data. An example of this is seen in a portion of the LCD stating:

PVA (percutaneous vertebroplasty) or percutaneous kyphoplasty (BKP) is reasonable and necessary in Medicare beneficiaries with the following:

1a. Acute osteoporotic vertebral column fractures (VCF) (T5 – L5) (< 6 weeks) identified by advanced imaging (bone marrow edema on MRI or bone-scan/SPECT/CT uptake) within 30 days of intervention.

There is also an asterisk that states: **"or at least acute on chronic component"**

This change would limit Vertebral Augmentation to only acute vertebral compression fractures thereby leaving out subacute fractures. This is completely opposite of previous policies, ignores the hundreds of articles, dozens of randomized control trials, a large post-market trial and the world's largest vertebral augmentation registry that supports the treatment of subacute fractures. Even with the asterisk comment it is unclear if fractures that are older than six weeks and have acute symptoms are covered. A previous expert opinion publication to guide the management of patients with painful vertebral compression fractures (VCFs), supports treating patients based on symptoms rather than timing. The evidence supporting the treatment of painful subacute VCFs is extensive and has not changed but new information does exist that supports treating acute fractures in patients whose symptoms warrant it but instead of adding the treatment of acute fractures, this LCD eliminates the treatment of the exact fracture age it previously supported.

The other very controversial portion of the LCD states:

1b. Multidisciplinary team consensus considering such factors as the extent of disease, the underlying etiology, the severity of the pain, the nature of any neurologic or ambulatory dysfunction, the outcome of any previous non-invasive treatment attempts, and the general state of the patient's health.

This change was based on an unreferenced document from the Cardiovascular and Interventional Society of Europe (CIRSE) and is perceived as completely unrealistic and unworkable. While multidisciplinary care is important for optimizing treatment of underlying conditions that result in vertebral compression fractures, application of the proposed multidisciplinary pre-procedural standard will limit beneficiary access to these procedures which have been shown to significantly improve pain and function. A multidisciplinary team may be applicable in some environments where all specialties exist and work in a single institution but many of the locations where patients undergo vertebral augmentation do not have access to a multidisciplinary team and this requirement will limit patient's access to this important procedure. We now know after the publication of the "Number of Patients Needed to Treat to Save a Life" paper that for every 15 patients treated one life will be saved at one year so the downturn can predict a defined number of deaths that will be caused from this change.

Finally all of the contraindications listed in the LCD are grouped together as absolute contraindications rather than stratified into relative and absolute. These treatment exclusions include such things as an allergy to the fill material as an absolute contraindication when it is widely known that there are multiple different materials one can use for Vertebral Augmentation. Many of these exclusions are nonsensical and some will hurt our most vulnerable patient populations disproportionately.

Everyone should reach out to their regional Medical Director to comment on these and other changes to the LCD. We have recently heard of some potential issue with denials with application of vertebral augmentation to pathologic fractures of non-osteoporotic etiology under the new proposed LCD. Expert input is not only valuable in this process but, as you have seen, it is critical in formulating a workable LCD that will be good for the patients we care for.

Updated May 31, 2020

The updated LCDs for Vertebral Augmentation look MUCH better with the multidisciplinary consensus requirement removed and subacute fractures added to acute fractures for appropriate treatment timeframes. This is a distinct improvement.

Some of the challenges that remain are:

1. Clarification on no more than 3 levels and if it means in total rather than per session, then that requirement should be argued
2. For WPS, CGS, NGS they need to add cancer dx codes to their coding and billing articles.

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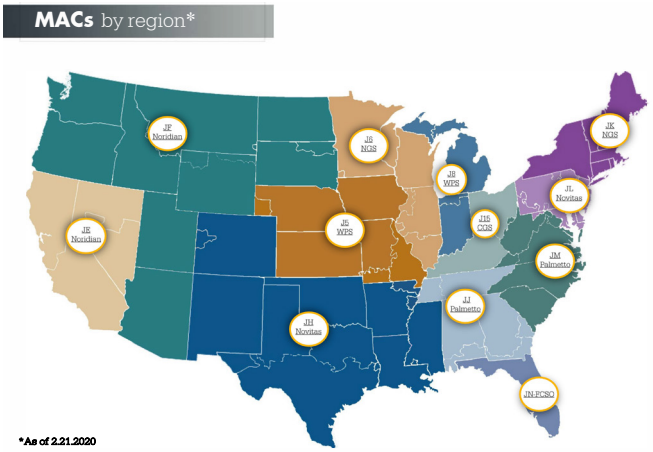

*Data collected from a variety of sources including CMS and MAC websites (B. Boschetto, Reed Smith Consulting; C. Kuretich, Reimbursement Consultant). As of 3/03/2020

2020-2021 Executive Committee Takes Office in Dana Point

The following members of the ASSR 2020-2021 Executive Committee assumed office immediately after the February 15, 2020, Annual Business Meeting. They will each serve in the positions listed below through the 2021 Annual Business Meeting in New Orleans, LA.

President
Daniel T.D. Nguyen, M.D.

President- Elect
Lubdha M. Shah, M.D.

Vice President
Jack W. Jennings, M.D., Ph.D.

Secretary/Treasurer
Wende N. Gibbs M.D.

Member-at-Large
Gaurang V. Shah, M.D.

Member-at-Large
Edward P. Quigley III, M.D., Ph.D.

Member-at-Large
Eric D. Schwartz, M.D., M.S.

Member-at-Large
J. Levi Chazen, M.D.

Member-at-Large
Douglas P. Beall, M.D.

Member-at-Large
Peter Kranz, M.D.

First Past President
Michele H. Johnson, M.D.

Second Past-President
John L. Go, M.D., FACR

Third Past President
John D. Barr, M.D.

ACR Councilor (ex-officio)
Walter S. Bartynski, M.D.

Alternate ACR Councilor
Joseph C. Sullivan, M.D.

YPS Liaison (Non-Voting)
Miriam Peckham, M.D.

YPS Liaison (Non-Voting)
Amit Aggarwal, M.D

2020-2021 Committee Chairs Appointed

The following Committee Chairs have been appointed to serve for the 2020-2021 term. They will each serve in the positions listed below through the 2021 Annual Business Meeting in New Orleans, LA.

Corporate Support Committee
Chair: Douglas P. Beall, M.D.

Meeting Planning Committee
Chair: Daniel T.D. Nguyen, M.D.

Membership Committee
Chair: Edward P. Quigley III, M.D., Ph.D.

Nominating Committee
Chair: Jack W. Jennings, M.D., Ph.D.

Program Committee
Chair: Daniel T.D. Nguyen, M.D.

Rules Committee
Chair: Eric D. Schwartz, M.D., M.S.

Ad Hoc Abstract and Awards Committee
Chair: Jason Talbott, M.D., Ph.D.

Ad Hoc Clinical Practice Committee
Chair: Jeffrey Stone, M.D., FACR

Ad Hoc Gold Medal Committee
Chair: Gaurang V. Shah, M.D.

Ad Hoc Research Committee
Co-Chair: Lubdha M. Shah, M.D.
Co-Chair: Peter Kranz, M.D.

Ad Hoc Website Committee
Co-Chair: J. Levi Chazen, M.D.

Ad Hoc Social Media Committee
Co-Chair: Ichiro Ikuta, M.D., M.M.Sc.
Co-Chair: Matthew Parsons, M.D.

Ad Hoc Advocacy Committee
Chair: Kurt Remley, M.D.