



## ISSRT Newsletter -Spring 2021

.....Editors: Holly Heisner & Patti Holvey.....

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## PRESIDENT'S CORNER:

Happy Spring! As I look around, I see so many signs of Spring. Flowers blooming, Dogwood and other trees are budding and the sounds of children playing outside. Just as these things happen every Spring so does the ISSRT Annual conference.

The ISSRT Annual conference was held on April 8-10, 2021. Although we meet virtually, it was a spectacular conference. Thanks to Sue Dumford and her committee for a job well done. We began the conference with our Board Meeting. During the Board Meeting we had the installation of officers for 2020-2021. We presented the budget for 2020-2021 as well. The meeting then switched to the President's Welcome. I chose to use the theme "Hands" in my welcome. Our hands are used so many ways. This year we are going to put OUR hands to work for you our members so we can be even more effective for you then we have been in the past.

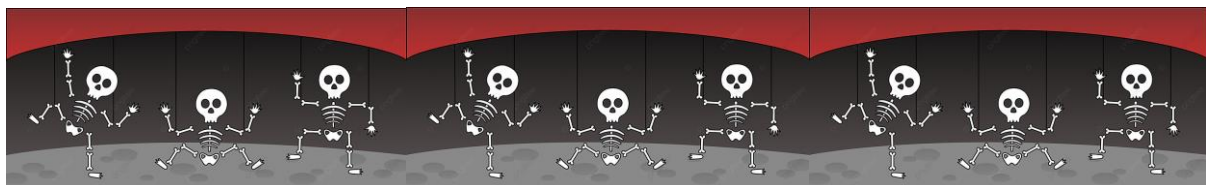
Then the "real" conference began.... I must say Dr. Bushong is quite the presenter. His presentation was very humorous but very factual. The rest of the presenters were just as informative and brought so much to light for all those in attendance. There was something for everyone and everyone seemed to enjoy the presentations. The surveys confirmed that. We hope to meet in person at the 2022 Annual conference in Bloomington. It will be so good seeing everyone again in person.

As I write this article the Spring Board Meeting will be held April 23-24, 2021 in Bloomington. We have many things to discuss. We will be developing the Strategic Plan for 2021-2026, looking at our finances and then what is the best way for us to invest for the future, look into NRTW 2021, recap the events of the 2021 Annual Conference and begin the discussion of the 2022 Annual Conference and finally review the reports of all the other committees that make up the ISSRT.

And of course, with Spring comes graduation! We want to congratulate the 2021 graduates. Your hard work has now paid off and you are ready to either go back into the classroom for advance studies in other modalities in radiology or seek out that job that you have been preparing for these past two years. Whatever path you choose may it be the best for you and enjoy the work you do. We the ISSRT Board wish you the best and so proud to call you, our colleague.

Have a great Spring and know our hands are working for you and hope you would consider giving us your hands in meeting these needs. Peace to you.

Patrick Murphy-ISSRT President



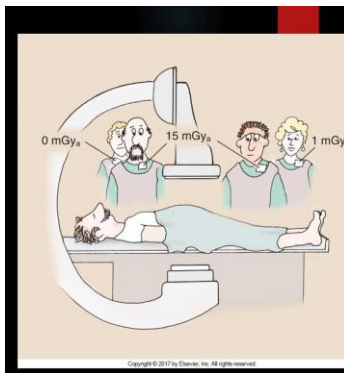
## CONFERENCE OVERVIEW



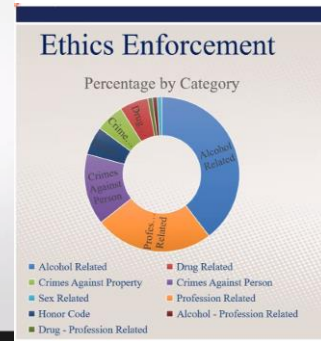
Here are some speaker highlights from our Annual Conference. Thank you so much for those that presented and attended! And a special thank you to Supertech and Scrubs Etc for their sponsorship.

**When the Doctor Becomes the Patient - Dr. Evan Cohn**  
**CT/MRI Pathology - Jennifer Walker**  
**ISSRT Business Meeting**  
**CT/MRI Pathology - Jennifer Walker**  
**Radiology and the Transgender Patient - Patrick Murphy**  
**Radiation Protection for Radiography Professionals - Jerry Fox**  
**An Overview of the JRCERT 2021 Standards – Brian Leonard**  
**ARRT 101 - Dr. Paul Larson**  
**Babbling Brainstorm to Professional Portfolio - Patti Holvey**  
**Quality in Radiology: It Takes a Village - Dr. Jonathan Tresley**  
**To Shield or Not to Shield, That is the Question - Dr. Stewart Bushong**  
**The Importance of Professional Societies - Cathie Kukec**





Always Remember ...  
Contact the office for assistance.  
[mail@jrcert.org](mailto:mail@jrcert.org)  
312.704.5300



Up Next:  
**The Importance of Professional Societies**  
Cathie Kukec



## Portfolio vs Resume

Quality issue: Technical—Poor inspiration

- First radiograph with poor inspiration looks like mild interstitial edema
- Repeated radiograph with better inspiration shows no edema

### To Shield or Not to Shield

Stewart Carlyle Bushong, ScD, FAAPM, FACR  
Baylor College of Medicine  
Houston, TX  
[sbushong@bcm.edu](mailto:sbushong@bcm.edu)



## STUDENT SCHOLARSHIP RECIPIENTS



### Congratulations to the ISSRT Scholarship Recipients

**Elizabeth Bray Scholarship**  
Danielle Loague- College of Dupage

**Northern Region Scholarship**  
Alexandra Silarski- Mercy Health School of Radiology

**Central Region Scholarship**  
Megan Jamison- Lincoln Land Community College

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Danille Loague -College of Dupage and Tim Cuff  
Elizabeth Bray Scholarship Winner



Megan Jamison-Lincoln Land  
Central Region



Alexandra Silarski Mercy Health School of Radiology  
Northern Region Scholarship Winner

# STUDENT E-POSTER WINNERS



## Congratulations to our Scientific Research Paper & ePoster Winners!



### ePoster Winners:

**1<sup>st</sup> Place: Emily Schmidt**  
Infantile Cortical Hyperostosis  
Lincoln Land Community College

**2<sup>nd</sup> Place: Whitley Barto**  
Craniosynostosis  
Lincoln Land Community College

**3<sup>rd</sup> Place: Makenzie Smallwood**  
Pediatric Imaging  
Richland Community College

### Infantile Cortical Hyperostosis

**Abstract**

Medical imaging plays a critical role in the diagnosis of Infantile Cortical Hyperostosis, also called Caffey disease. The modalities used for diagnosis are radiography, ultrasound, MRI, and nuclear medicine.

**Introduction**

Caffey disease is predicted to occur in approximately 2 per 1,000 infants worldwide. It is distinguished by new bone formation which leads to hyperostosis of the affected bone. This causes the bone to dramatically increase in width. The bone abnormalities usually affect the mandible, maxilla, clavicle, and the shafts of long bones in the arms and legs. It is caused by a mutation in the *CSF1R* gene. Symptoms associated with Caffey disease are swelling, pain, and tenderness in bones and joints. Usually no treatment is necessary, and it goes away within a few months. The new bone also disappears as it is resorbed by the body through a normal process called bone remodeling.<sup>1,2</sup>

**Methods**

Radiography can show marked increase in density and width, and soft tissue swelling over the involved bones.<sup>3,4</sup> Ultrasound can identify soft tissue edema and early periosteal new bone formation. For best results, a high frequency transducer should be used.<sup>5</sup> MRI can show periosteal which is inflammation of the periosteum and soft tissue edema. MRI cannot detect soft tissue edema in inflicting the diagnosis. Therefore, radiography is the modality of choice for investigating Caffey disease. Figures 2 and 3 are axial radiographs depicting the new bone growth with edema.<sup>6</sup> Nuclear imaging shows that during the active phase of the disease, there is an increased radiotracer uptake in the involved bones. Nuclear scans can also be useful for showing the extent of disease.<sup>7</sup>

**Conclusion**

Caffey disease is a condition that affects infants. Radiography, ultrasound, and MRI are used to help with diagnosis. Ultrasound is one of the key tools to help with diagnosis of Infantile Cortical Hyperostosis.

**References**

1. Caffey disease. Medscape's StatPearls. StatPearls Publishing; December 1, 2020.
2. Infantile Cortical Disease. StatPearls Publishing; December 1, 2020.
3. Caffey disease. Medscape's StatPearls. StatPearls Publishing; December 1, 2020.
4. Caffey disease. Medscape's StatPearls. StatPearls Publishing; December 1, 2020.
5. Caffey disease. Medscape's StatPearls. StatPearls Publishing; December 1, 2020.
6. Caffey disease. Medscape's StatPearls. StatPearls Publishing; December 1, 2020.
7. Caffey disease. Medscape's StatPearls. StatPearls Publishing; December 1, 2020.

Emily Schmidt

### CRANIOSYNOSTOSIS

Craniosynostosis is a birth defect where the one or more of the fibrous joints of the skull close too soon.<sup>1</sup> 3D CT and MRIs are used to diagnose and create surgical plans for craniosynostosis.<sup>2</sup>

**Introduction**

Infants are born with multiple soft spots and flexible sutures in order to give the brain room to grow as the baby grows. Around the age of 2, these fibrous sutures turn to bones. When one or more of these sutures turn to bone prematurely it is called craniosynostosis.<sup>3</sup> Radiologists estimate that about 1 in every 2,500 babies is born with craniosynostosis.<sup>4</sup>

**Methods**

Craniosynostosis can be diagnosed by a specialist which is usually a pediatric neurologist. The neurologist will perform a physical exam, imaging (CT, MRI, or US), and possibly genetic testing if it is visible on the ultrasound. MRI and CT can be used to visualize all sutures and show what sutures are prematurely fused and what sutures are normal. Also, MRI and CT can be used to visualize the brain and see if there is any abnormality. Also, MRI and CT can be used to visualize the brain and see if there is any abnormality. Also, MRI and CT can be used to visualize the brain and see if there is any abnormality.

**Conclusion/Results**

Medical imaging is important in the process of diagnosing craniosynostosis, specifically CT and/or MRI to visualize the entire skull and for surgical planning. Surgery is usually performed to allow pressure on the brain, allow the brain to grow, and improve appearance. If untreated it can cause permanent facial deformities and mental problems in the future. It is most often for pressure on the brain, not cosmetic reasons from developmental delays, seizures, or death.<sup>5</sup>

**References**

1. Craniosynostosis. Medscape's StatPearls. StatPearls Publishing; December 1, 2020.
2. Craniosynostosis. Medscape's StatPearls. StatPearls Publishing; December 1, 2020.
3. Craniosynostosis. Medscape's StatPearls. StatPearls Publishing; December 1, 2020.
4. Craniosynostosis. Medscape's StatPearls. StatPearls Publishing; December 1, 2020.
5. Craniosynostosis. Medscape's StatPearls. StatPearls Publishing; December 1, 2020.

Whitley Barto

### Children's Ages

Children from ages infancy to adolescents or preteen can come to the imaging department.

**Knowing the age groups:**

**Infants:**

- Depend on their parents
- Need warmth & encouragement
- Avoid loud noises around them

**6 months-2 years old:**

- Fearful of pain & separation from parents
- Limit amount of people helping with the exam
- May need to use immobilization techniques

**2 years old-4 years old:**

- "Why?" stage
- They are very curious

**5 years old:**

- More independent
- Like to know how things work

**8 years old-12 years old:**

- Quick to cooperate
- Modest & embarrassed easily

**Adolescents & preteens:**

- Want to be treated as adults and with respect
- Need clear explanations
- The age of puberty

### Pediatric Imaging

### Tips & Techniques

"Working successfully with children requires an open mind, patience, creativity, the willingness to learn, and the ability to look at the world through the eyes of a child" (Thames, 2016).

**Techniques**

- Address the child on their level
- Prepare the exam room before bringing the child back
- Keeping doses as Low As Reasonably Achievable (ALARA)
- Addressing the child if they are old enough to understand and comprehend
- Using appropriate shielding when required
- Keeping explanations simple and understandable
- Using distractors, such as a cartoon or toy
- Give praise when needed
- Answer questions truthfully

Makenzie Smallwood

## STUDENT RESEARCH PAPER WINNERS



**Congratulations to our  
Scientific Research Paper  
& ePoster Winners!**



Radiography as a Resource for the Treatments of Animals

### **Research Paper Winners:**

**1<sup>st</sup> Place: Joline Morris**

*Radiography As A Resource For The Treatment Of Animals  
School of Radiography Mercy Health*

**2<sup>nd</sup> Place: Macy Allen**

*Hutchinson Gilford Progeria Syndrome  
Blessing Hospital School of Radiologic Technology*

**3<sup>rd</sup> Place: Ashley Otten**

*Crohn's Disease  
Blessing Hospital School of Radiologic Technology*

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### **First Place**

Radiography As A Resource For The Treatment Of Animals

Joline Morris

School of Radiography Mercy Health

\$100.00

### **Radiography as a Resource for the Treatment of Animals**

### **Second Place**

Hutchinson Gilford Progeria Syndrome

Macy Allen

Blessing Hospital School of Radiologic Technology

\$75.00

[Hutchson Gilford Progeria Syndrome](#)

### **Third Place**

Crohn's Disease

Ashley Otten

Blessing Hospital School of Radiologic Technology

\$50.00

## RAFFLE WINNERS

Sydney Rosborough- \$100 Scrubs Etc gift card  
Amanda Feeney- ASRT Safety Essentials  
Nancy Rizo- "Good Enough" Isn't Always Good Enough!  
Dorothy Jones- Fluoroscopy – Radiation Protection of the Eye  
Matt Cardinal- ASRT CT Basics  
Jackie Whipple- ASRT MR Basics

## CONFERENCE T-SHIRT SALES



**We have sold 50+ shirts helping to raise over \$1,000.**



[READ MORE ON OUR WEBSITE](#)

## 2021 CONFERENCE WRAP UP

Whew, we all survived our first ISSRT virtual conference and our first experiments with QR codes, Google Forms, Zoom Meeting report spreadsheets, looping powerpoint presentations, Google survey analytics, and a myriad of other new challenges. But all in all, we are proud that we could bring you a seamless (most of the time) online conference.

We wish to give a big thank you to all of our speakers who donated their time to make our conference a success! A shout-out to our sponsors Supertech and Scrubs, Etc. A special thank you to the ISSRT Conference Committee, the Social Media Committee, the ISSRT Webmaster, the ISSRT Executive Assistant, and the ISSRT Board for successful planning and execution of our first virtual conference. And another big thank you to the College of DuPage for allowing us to stream from COD's campus.

## 2022 CONFERENCE

What will next year bring? Who knows?! But planning is underway for the 87<sup>th</sup> Annual ISSRT Conference to be held April 13 – 15<sup>th</sup>, 2022 and hopefully it will be face-to-face in Bloomington, IL. So, mark your calendars and get those Scholar Bowl Teams in shape! We hope to see you there!



***Thank you to all that joined us for this year's virtual ISSRT conference. We also would like to thank all the speakers who took time out of their busy schedules to provide such great information to all of the conference attendees.***

***Stay Tuned for our Back-to- School Mini-Edition Set to Release 9/13/21***



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