

The Rotating Anode

FALL 2023



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EXECUTIVE COMMITTEE MEETING MINUTES

10 a.m. June 17

Benton Hall, Washburn

Voting members present: Kati-lyn Slaton, chair of the board; Gale Brown, immediate past president; and Denise Orth, president.

Non-voting member present: Toni Caldwell, president-elect.

Call to order: Katilyn called the meeting to order at 10:04 a.m.

Approval of minutes: Minutes from the post-convention meeting were approved.

Financial report: Denise presented the financial report through May 31. The report showed income of \$37,297.57 and expenses of \$28,792.94. The net worth report showed a checking account balance of \$10,675.95 and certificates of deposit worth \$45,531.15 for a total net worth of \$56,207.10. Gale moved to approve the financial report as given and Katilyn seconded the motion. Motion passed.

Old Business:

None.

New Business:

Items to purchase: Printer, luggage cart, additional computer for secretary-treasurer or *Rotating Anode* editor.

ASRT Financial Assistance: The application is open Aug. 1-31.

ASRT House of Delegates: Items of interest. Toni is Rebecca's mentor. No pressing issues to impact affiliates.

Announcements:

The fall board meeting will be Sept. 9 via Zoom. The executive committee will meet at 9:30 a.m. and full board at 10. The winter board meeting will be Jan. 20 via Zoom. The executive committee will meet at 9:30 a.m. and full board at 10. Katilyn may not attend.

The 87th Annual Convention will be April 4-6 at the Drury Plaza Hotel Broadview in Wichita. The pre-convention meetings will be April 4; executive committee is at 3 p.m. and full board is at 3:30.

Adjournment: The meeting adjourned at 10:30 a.m.

BOARD OF DIRECTORS MEETING MINUTES

10:30 a.m. June 17

Benton Hall, Washburn

Voting members present: Kati-lyn Slaton, chair of the board; Gale Brown, immediate past president; Denise Orth, president and executive secretary; Toni Caldwell, president-elect and legislative chair; Harmony Ibarra, vice-president; Shanna Bennett, secretary-treasurer; Jeskan McGovern, director at large; Ashton Kahrs, student representative; Becky Dodge, education co-chair; Tara Rohn, professional development chair; Kelly Denton, western area representative; Kyle Ibarra, central area representative; and Kirsten Oswald, eastern area representative.

Non-voting members present: Jen Smith, media coordinator and *Rotating Anode* editor; Arrica Braun, professional development vice-chair; Dixie

Copeland, education co-chair.

Call to order: Denise called the meeting to order at 10:30 a.m.

Quorum: Shanna established a quorum.

Orientation:

Denise discussed the documents in the Google Drive and reviewed the dates of the annual tasks for the executive secretary and committee chairs.

Key points:

Applications for the ASRT Senior Delegate are due Sept. 15, 2024, to take office in January 2025. There also need to be alternate delegates chosen to avoid probation.

The WIX website renewal will come

A NOTE FROM THE PRESIDENT

Greetings!!

National Radiologic Technology Week will be here very soon! It is always fun to celebrate the "beam of light" discovered by Roentgen! His discovery has led to an awesome health care profession where we impact our patients many times every day. Whether it is performing a quality diagnostic exam, taking the time to smile and show you care, doing everything you can for critically ill patients, or volunteering your time and talent, you are essential to the well-being of patients and their families. I am extremely proud to share this profession with so many dedicated, caring professionals! Although we officially have one week to celebrate, I challenge you to let your "beam of light" shine every day!!

Are you wanting to be more involved in your society and profession? Even on a small level? We have many opportunities for you. The KSRT is participating in an ongoing service project of making IV covers for pediatric patients at Wesley Children's Hospital in Wichita. Do you crochet and would like to be involved? Wonderful! Please reach out to ksrt.exsec@gmail.com and I will gladly visit with you and find the perfect opportunity for you.

Check out ksrad.org for information regarding the convention in Wichita 2024! We are excited to be in the Air Capital and are working hard to provide a high-quality experience. We would love to see you there!

Deepest respect,

Denise Orth
KSRT president

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up in April 2024. To receive a substantial discount, we must have a Capital One credit card. Jen offered that she has a Capital One card.

Denise also went over the ASRT affiliate deadline calendar. The affiliate financial assistance program is due by Aug. 29, with the potential to receive \$5,000.

Policy and procedures were reviewed and are available in the Google drive. Denise recommended everyone look over their job descriptions.

Denise will upload a list of educational program directors and their contact information to Google drive for the student representative to email information out. This is to encourage students to attend conventions and get more involved.

Denise will configure a new password for Facebook and Instagram so we will have one password for all social media accounts. Denise will send the password to the appropriate parties.

A student intern, Rebecca Glahn, agreed to be the KSRT student representative at the ASRT House of Delegates meeting.

The society sends two alternate delegates to ASRT with a budget of \$1,200. If the selected person goes over budget, the board of directors will vote on reimbursement.

Consent Agenda:

The consent agenda process is a tool to help speed up board meetings. If a member has a specific report they would like to discuss, there will be a vote. If approved, that report will be pulled into New Business and discussed. Denise asks if anyone has anything that they would like to pull from the agenda to discuss. Jen inquired about a formatting error found where Kelly Denton's report was listed under the central area representative instead of the west area. Denise corrected the error.

Katilyn Slaton, chair of the board: I reviewed the job description and will be sending out the executive meeting agenda. Sorry for the delay

on the agenda. I also am the second delegate going to ASRT in Reno and will have a report for the board at the September meeting.

Denise Orth, president: Since the convention I have provided Toni the username and password to our ASRT portal, updated the portal on the ASRT site, placed orientation documents into the Google Drive, added a June 2023-May 2024 folder to the Google Drive (all documentation for this fiscal year will be placed in this folder), updated the board of directors contact list and placed it in the Google Drive, and maintained email communication with the board.

Gale Brown, immediate past president and bylaws chair: I was able to send some convention photos to Jen for the Google 2023 convention file. I will be attending the meeting over Zoom, looking forward to seeing everyone though.

Toni Caldwell, president-elect and legislative chair: Since the convention, I have reviewed the responsibilities for my position, reviewed the minutes from the convention, made my arrangements for ASRT convention, turned in paperwork for the ASRT CRTA committee (renewed), turned in application for Advocacy Academy (turned down because was full), continued to monitor legislation in Kansas, spoke with representative Pat Petty concerning a possible Day on the Hill, have been unable to access invoices from the lobbying firm, so I have not reviewed them (and I contacted them about sending recent invoices).

Harmony Ibarra, vice-president and membership chair: Since April I have reviewed KSRT documents uploaded to the Google Drive, spoken with Denise about lapsed memberships and await a report from Memberplanet, and plan to contact those lapsed individuals to inquire about renewing the membership.

Shanna Bennett, secretary-treasurer: Since the convention, I have reviewed the responsibilities of my position.

Jeskan McGovern, director at large: Since the convention, I have reviewed the responsibilities for my

position.

Becky Dodge and Dixie Copeland, education co-chairs: Since convention, the Education Committee has discussed continuation of the ACE Team efforts (a July 2023 meeting will be scheduled soon); received final convention 2023 numbers; worked on the 2024 convention (April 4-6, Drury Plaza Hotel Broadview in Wichita), such as updating the speaker form and brainstorming themes; begun work on the 2025 convention, such as reaching out to possible locations in Topeka/Manhattan/Junction City and asking radiology education programs to look at their 2025 spring break dates.

Tara Rohn, professional development chair: I have shared the Professional Development Google Drive folder with the new vice chair, Arrica Braun. We started to update the rules for the upcoming year.

Kirsten Oswald, east area representative: Since convention I have reviewed my responsibilities for my position, reviewed minutes from convention, and emailed Kelly Denton discussing how she reaches out to area hospitals.

Kelly Denton, west area representative: Since convention, I have met via Zoom with western Kansas hospitals to discuss current issues, staffing, and reviewing protocols needed by some facilities. I have communicated with Kristen regarding area rep duties. For convention vendors, I have revised the vendor sponsorship agreement to include lunch on Friday.

Ashton Kahrs, student representative: Since the convention, I have reviewed my responsibilities and description from the Google Drive documents.

Jen Smith, *The Rotating Anode* editor and media coordinator: Since the annual convention, I have put together the spring issue of *The Rotating Anode* and published it online and in print for the 17 who are still grandfathered in for it. I also have updated the website with new board and committee members and their photos as well as updated the email group. Additionally, I have prepared for the ASRT House of

Delegates meeting, where I will serve as the CT chapter chair.

Denise stated this meeting will follow Robert's Rules of Order to provide an efficient meeting and allow everyone to stay on task. If you would like to speak, raise your hand and she will call on each person in order.

Approval of minutes: Toni motioned to approve the minutes from the meeting at the annual convention on March 31, Harmony seconded, motion passed.

Reports: The Board of Directors report was emailed to board members before the meeting.

Financial reports were available to board members before the meeting. During the meeting, Denise provided an explanation on each category on the financial report. Overall, we are in great financial shape. Toni motioned to approve the financial report, Jeskan seconded, no discussions, no extensions, motion passed.

Old business:

Email blast: We are allowed two email blasts per year that go to all ASRT members in Kansas; we use one for convention and one for later in the year. Harmony discussed plans for the email blast and is looking for suggestions. The past two years we have sent out flyers. Toni suggested buying one year and possibly earning a free year through a drawing. Kyle suggested space the email blast out so that it doesn't coincide with other months that fees are due. Katilyn suggested a referral program. Other suggestions were to send it out around National Radiologic Technologist week. Between now and the September board meeting Harmony, Kyle and Ashton will work on the email blast and incentives to become a KSRT member.

Student interns: Student interns are needed. We have one, however, we have three student intern positions. Send interested students' information to Denise.

2023 Convention: Becky reported that overall, the evaluations were positive. Some commented that the topics were interesting. The students

EMAIL VOTES

July 2023

Membership data: Jen Smith requested the use of KSRT information for her master's degree capstone project. Becky Dodge motioned that Jen be provided with numbers, not names, of KSRT memberships to include the total number of technologists, students, and students from Cleveland College. Jeskan McGovern seconded the motion. The motion passed.

Alternate delegate: Kyle Ibarra served as the alternate affiliate delegate to the ASRT House of Delegates meeting in Reno, Nevada, in June. He provided receipts documenting expenses totaling \$1,340.27. The budget was approved for \$1,200. Kelly Denton motioned to cover the \$140.27 overages per Kyle's receipts). Jeskan McGovern seconded the motion. The motion passed.

commented on having more "active" presentations as they were having a hard time sitting still for long periods of time.

Becky will change the wording to reflect the \$150 not being enough to really sponsor a full break.

Kelly altered the vendor sheet to include the option for electrical power and whether the vendor would like lunch. The event sponsor section would stay the same.

Toni thought having one emcee introducing speakers worked well and we should continue that. Toni also is looking for volunteers to take over the silent auction. She will upload a document to the Google Drive outlining the process of the silent auction.

Becky will alter speaker forms to say time slots cannot be reserved until speaker forms are turned in. This will help us to not have two speakers present at the same time. Some other ideas were discussed about a possible

student track.

Denise is going to request someone from ASRT and ARRT attend our meeting to present a CEU.

Tara would like to switch the essay competition to an electronic submission format and digitize the Ray Bowl questions.

Arrica brought up a concern that during the vendor breaks students were not interacting by asking questions, they would just ask for a sticker. We discussed possible ways to get students to interact more and ask questions.

The group discussed ideas regarding ways to keep students and techs from entering and leaving the room while speakers are presenting and/or before the room is ready for people to come in.

New business:

Convention: 2024 KSRT Convention will be April 4-6 at Drury Plaza Broadview Hotel in Wichita. Becky and Dixie presented several themes which the board voted on. The majority voted for Piloting the Future. Possible locations for the 2025 KSRT Convention are Junction City or Manhattan.

Area representatives: The board discusses expanding to two eastern area representatives because of the large number of technologists. Harmony motioned to expand each area's representative positions to include no more than two people per area. Kirsten seconded the motion. Kaitlyn presented the question about which of the two would have voting power. Only one representative would provide the vote, however, they would be able to alternate between the two. Motion was approved. The territory map was presented and will be uploaded to the Google Drive and possibly in *The Rotating Anode* along with the names and contact of each representative. Toni motioned for Heidi Chermak to be appointed as the co-east area representative. Jeskan seconded the motion, no further discussion. Motion approved. Denise will contact Heidi.

ASRT Financial Assistance Pro-

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THE PAST, PRESENT, AND FUTURE OF MAMMOGRAPHY

By Katherine Lednicky, Washburn University

Third-place essay

Abstract

The purpose of this paper is to identify where mammography comes from, how it is used today, and what to expect from mammography in the future. More than 100 years in the making, mammography has grown into a specialized field that saves lives through screening and diagnostic imaging. Mammography equipment today is highly specialized to provide the highest quality images. The future of mammography will build on previous knowledge to improve image acquisition and interpretation for many years to come.

Introduction

Mammography uses radiation to create images of breast tissue (Gaillard & Murphy, 2021). Breast imaging is used for screening or diagnostic purposes. Screening mammography is used to find malignant breast tissue in women who do not exhibit symptoms to catch the malignancy in an early, more curable stage. Diagnostic mammography is used with patients who have symptoms of malignancy or have had an abnormal result on a screening mammogram. Diagnostic mammography focuses on identifying the type of pathology seen and determining a diagnosis. Diagnoses vary from mild to severe, which in turn affects the course of treatment and survival rates. Mammography first was chronicled in 1913 (Kruger & Bell, 2021). Through the years, developments have been made to improve the quality of images as well as patient safety in what we know as mammography today. Mammography still is growing as a field and new developments are being tested and implemented. This paper will delve into the past, present, and future of mammography in order to understand where it came from and where it is going.

History of Mammography

The history of mammography can be divided into three significant time frames: the Age of Pioneers, the Age of Technical Progress, and the Modern Age (Kalaf, 2014). Starting with the Age of Pioneers, the first recorded study of breast tissue using x-rays occurred in 1913 by Albert Saloman in Berlin, Germany (Kruger & Bell, 2021). Saloman imaged 3,000 breast specimens collected from the morgue to study various pathologies. In a published article, Saloman said x-ray photographs of breast tissue were able to demonstrate the formation and metastasis of cancer through axillary lymph nodes. Saloman was also the first person to connect microcalcifications with breast cancer through the use of radiographic imaging. Following Saloman's publication, many people began their own mammography studies. In 1950, Helen Ingleby studied changes in breast tissue according to patient age and menstrual status (Kalaf, 2014). Raul Leborgne brought attention to the importance of patient positioning when con-

ducting a mammogram as well pioneering the improvement of image quality. Leborgne also can be credited with emphasizing the difference between malignant and benign calcifications found in images.

The Age of Technical Progress brought the development of xeromammography (Kalaf, 2014). Xeromammography is a screening method that produces images using x-rays similar to using luminescence in traditional radiographic imaging (Merriam-Webster, 2006). During this time, the American College of Radiography (ACR) asked Xerox to begin an advanced research program using the xeromammography method (Kalaf, 2014). In 1965, Charles Gross created the first x-ray unit specifically for mammography using molybdenum. The molybdenum machine was able to produce a higher contrast between normal breast tissue, fat, and microcalcifications. Gross also developed the compression system used in mammography today.

The Modern Age of mammography began in 1970 with the use of high-definition screens and industrial films to reduce the amount of radiation in each exam (Kalaf, 2014). The mid-1970s emphasized the ability of mammography to diagnose minimally invasive cancer as well as the advantages of using magnification to diagnose malignant tumors which display less obvious signs than traditionally seen. Mobile mammography became popular in addition to preoperative marking of a lesion with a metallic needle. Considering all the innovations thus far in mammography, in 1985, Tabár evaluated screenings of women between the ages of 40 and 79 and determined a 31% reduction in mortality of women who received mammograms.

Mammography Today

Throughout the world, the incidence of breast cancer has increased (Long et al., 2019). One in eight women in the United States will have breast cancer at some point in their life. Although breast cancer is the second most common cancer diagnosis in women, death rates have declined by 38% since 1989. This improved mortality rate is from early detection, better treatment, and the move away from using menopausal hormone therapy (MHT). Although research has been unable to determine exact causes of breast cancer, a family history of breast cancer increases the likelihood of disease development. As with all cancers, detection in the early stages is crucial for the success of treatment and survival. According to the United States Preventive Services Task Force (USPSTF), women ages 50-74 should get a mammogram every two years (Centers for Disease Control and Prevention, 2022). The USPSTF also advises that women between the ages of 40 and 49 should talk to their primary care physician (PCP) about when to start getting mammograms and how often to get mammograms.

Mammography equipment has evolved into highly

specialized units. Mammogram units today utilize high-frequency generators that give mammographers more precision over kilovolt peak (kVp), milliamperes (mA), and exposure time selection (Long et al., 2019). High-frequency generators are not as large, the linearity and reproducibility of exposures are improved, and the waveform output is more efficient to form a more effective beam. The tube and filter in mammography equipment are made from different materials than regular x-ray equipment. The most commonly used mammography targets are made of molybdenum or rhodium, and the most used filters are made of rhodium. Grids are used in mammography, the most common being a linear focused grid. Patient and technologist comfort were considered when creating rounded corners on breast platforms and compression paddles, automatic release of compression when the exposure is completed, and foot pedal controls to activate exposures.

Mammography equipment has followed all other modalities of radiology and evolved into the digital age (Long et al., 2019). Full-field digital mammography (FFDM) equipment is more expensive to purchase and maintain, but the advantages of being able to image dense breast tissue has pushed more than 98% of facilities in the country to install and utilize FFDM. When FFDM is used, radiologists can adjust images on the computer allowing for better visualization while reducing the number of exposures and dose to the patient. Higher resolution is required on FFDM images, so the files take up more space in the archive system. Additionally, the higher resolution images can be interpreted by radiologists only on high-resolution monitors.

Following FFDM, digital breast tomosynthesis (DBT) creates a three-dimensional image of breast tissue (Long et al., 2019). DBT scans the compressed breast at many angles in a short timeframe. The images then are reconstructed into high-resolution slices which can be viewed separately or in cine mode. Originally, DBT was used in combination with FFDM. Using both methods on a single patient significantly increased patient dose. However, eliminating the FFDM image while using DBT decreased patient dose by 40% to 50%, making DBT the more advantageous imaging method.

CE-MRI vs. CEM

Recent studies have evaluated the effectiveness of breast cancer detection using contrast-enhanced magnetic resonance imaging (CE-MRI) compared to contrast-enhance mammography (CEM) (Clauser et al., 2020). CE-MRI has been the method of assessing patients whose initial mammogram had suspicious areas and needed further investigation. CE-MRI does not expose patients to radiation, but it is a longer exam time and more expensive for patients. CEM is a new modality that is similar to digital mammography. Sensitivity for detection of cancerous lesions is increased in CEM. CEM requires less time to complete compared to CE-MRI. However, CEM uses ionizing radiation, and the exposure is significantly higher

compared to FFDM. Exposure can be reduced in CEM by removing the grid and using scatter-correcting software to create a good image.

The query of which modality, CE-MRI or CEM, provides the best diagnostic image continues to be studied. Kamal et al. (2021) deduced CE-MRI was the safer and better producing modality compared to CEM. CE-MRI can identify deep lesions and assess the extent of inflammatory malignant breast lesions that CEM cannot. However, CEM was found to be more useful than CE-MRI in preoperative staging and post-treatment surveillance of breast cancer.

Clauser et al. (2020) explored the use of low-dose CEM (L-CEM) and found it more favorable than CE-MRI. L-CEM utilizes the method of removing the grid in order to decrease exposure factors and consequently reduce patient dose. To compensate for the removal of the grid, software is used in post-processing of the image to remove scattered radiation and provide a diagnostic image. Clauser concluded L-CEM had a better detection rate for malignant lesions compared to CE-MRI. The sensitivity of L-CEM was just as good as CE-MRI as well as accuracy. Additionally, L-CEM could reduce the number of false-positive biopsies. More studies are needed to determine whether CE-MRI or L-CEM will become the standard imaging modality for investigating suspicious breast tissue.

Artificial Intelligence and Mammography

Artificial intelligence (AI) has started to make its way into mammography in the past few years (Yoon & Kim, 2021). AI has been applied as an algorithm in computer-based mammography as an interpretation tool to help radiologists identify cancerous lesions. Studies showed no AI algorithm could outperform a radiologist, but AI used in conjunction with radiologist interpretation had an overall improved specificity and accuracy. AI-based algorithms also can provide more efficient interpretation to reduce the workload of radiologists. Because the majority of mammogram screenings are negative, AI algorithms quickly can identify patients with a negative screening so radiologists can devote more time to patients with images showing suspicious features and plan further diagnostic testing. AI technology still is being tested, but the results appear promising for future application in mammography.

Conclusion

Mammography has grown into a highly impactful field of diagnostic imaging. From the Age of Pioneers beginning in 1913 to the present, mammography has become more sophisticated in image acquisition as well as safer for patients. FFDM and DBT provide radiologists with higher quality images which allow for increased accuracy of interpretation. Although the debate whether CE-MRI or CEM is more effective remains, it is likely CEM with the L-CEM modification will be the preferred method of diagnostic mammography in the future. Improved workflow

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MINUTES

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gram: Denise needs a new color printer with scan and fax capabilities. The cost would be around \$300. She also needs two new luggage carts, which would be about \$40 each. Becky would like to purchase wireless lapel microphones/holders for convention. Denise would like to list a computer as a possible need just in case we have the need in the future.

ASRT Affiliate Development

Program: Thoughts on the program? Any initiatives we need to improve on? Katilyn stated that it was helpful but not beneficial to pursue it again.

Policies and Procedures: Denise will clean up the documents and load them to the Google Drive.

ASRT 2023 House of Delegates: Katilyn, Toni, Jen, Becca, Kyle and Denise are heading to Reno. KSRT won second place in the 2023 ASRT

Foundation Annual Drawing Affiliate competition for most money raised per capita.

Other Business:

Kyle expressed concern with his term being up with the Kansas Board of Healing Arts. He would like to write a letter recommending Brian Ralph to be appointed. Toni can send another letter to see if it will help. Jesse Woltje's term will expire in 2024, and Hillary Lolley is on until 2026.

KSBHA will move CEU requirements to coincide with ARRT. CE Broker is not a requirement to sign up for, although it's an option. Kyle will send information regarding this to Denise.

Toni posted information on Facebook regarding the nuclear medicine advocacy bill that we should support.

Denise asked for volunteers on the board to help Becky and Dixie during the convention. Toni suggested asking for student volunteers. Harmony suggested we ask for volunteers for

the Ray Bowl tech team. Denise will search on Memberplanet for those members looking to volunteer and will send out names to the board.

Jen reminded everyone of the July 17 deadline for the *Anode*. Denise would like to include a message from the president in each issue.

Upcoming meetings: The fall board meeting will be Sept. 9 via Zoom. Executive Committee will meet at 9:30 a.m. and the full board at 10. The winter board meeting will be Jan. 20 via Zoom. Executive Committee will meet at 9:30 a.m. and the full board at 10.

The 87th Annual KSRT Convention will be April 4-6 at the Drury Plaza Broadview Hotel in Wichita. The pre-convention board meetings will be at 3 p.m. April 4 for the Executive Committee and 3:30 for the full board.

Adjournment: Harmony motioned to adjourn the meeting, Toni seconded, motion passed. Meeting adjourned at 1:51 p.m.

MAMMOGRAPHY

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and interpretation ability through AI algorithms further will enhance the effectiveness of mammography for patients and providers. The risk of exposure to radiation compared to the benefits of screening mammography results always may be a point of discussion between patients and their providers. However, early detection of malignancy has been proven to improve the effect of treatment and mortality rate of patients. Through proper patient education and further advancements, mammography will continue to save lives for many years to come.

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Crocheted Pediatric IV Covers



KSRT COMMUNITY SERVICE PROJECT

Each year the KSRT looks to give back to organizations that need assistance.
This will be a project that KSRT will support during the next year.

Wesley Children's Hospital needs crocheted pediatric IV covers. Each pediatric patient receives an IV cover during their hospital stay to help hide the IV and aid in maintaining the IV site.

What can you do?

Craft IV covers to donate and spread the word to others!

Crocheted Pediatric IV Covers

Materials:

Medium weight yarn (#4)

G hook

These directions will make a rectangle approximately 6 1/2" by 8". Some #4 yarns are a little light and will make a slightly smaller piece while others are a bit more bulky and will make a slightly larger one. Although gauge isn't critical, the finished piece must be roughly the stated size as the cover isn't designed just to fit over a child's little arm, but also must be large enough to cover the IV tubing, arm board, and taping to keep the IV securely in place. Work in back loops only. If able, use gender neutral colors of yarn or create covers in a variety of colors to appeal to all ages and genders of patients.

Chain 31

R1: SC in 2nd ch from hook and each chain across (30 SC). CH 1, turn.

R 2-7: SC in each SC across, CH 1, turn.

R 8: SC in first 6 st, chain 6, skip next 6 st, SC in the next st and each st across.

R 9: SC in each SC and chain across (30 SC) CH 1, turn

R 10 – 28 SC in each SC across. At end of row 28 fasten off leaving a long tail to sew seam with. (I usually leave about two feet)

Using the tail and a yarn needle, stitch the long edges together. I usually slip stitch using the two loops created by the starting chain and the back loop of the last row. I back stitch about every 6 stitches to create a tighter seam.

And I would like to add my personal thanks to you for your interest in helping make a scary and often painful experience, just a wee bit easier by providing these IV covers for the little people who will be the recipients.



Large & Small Cover



Large cover on adult hand



Small cover on adult hand

FOR MAILING IN DONATED IV COVERS PLEASE INCLUDE YOUR NAME, MAILING ADDRESS, AND PHONE NUMBER.

SHIP TO:

WESLEY CHILDREN'S HOSPITAL
ATTN: CHILD LIFE DEPARTMENT
550 N. HILLSIDE ST.
WICHITA, KS 67214

FOR MORE INFORMATION, PLEASE CONTACT THE CHILD LIFE DEPARTMENT AT 316-262-2177.



87th Annual Convention

April 4-6, 2024

Drury Plaza Hotel Broadview
400 West Douglas Ave
Wichita, KS 67202

Hotel Accommodations

A limited block of sleeping rooms has been secured. The room rate is \$109 + \$10 per parking spot per day. A complimentary hot breakfast is included for overnight guests. Reservations may be made online using the QR code or www.druryhotels.com. Also, reservations can be made by calling 1.800.325.0720. Be sure to use this *group code* (2441996) when booking. The group rate cutoff date is March 3, 2024.



Meeting Registration

ONLINE REGISTRATION is available at

https://www.memberplanet.com/s/ksrt/87thannualconvention_1

For greater savings, non-members are encouraged to join the KSRT for \$50 and pay the member rates (see membership application at www.ksrad.org). "KSRT Active or Associate A" rate is available to out-of-state attendees who send a copy of their state society's membership card with registration.

Early Bird Discount post-mark or submit online by March 11	Fri., 4.5 Only		Sat., 4.6 Only		Fri. & Sat. (4.5-4.6)	
	Early Bird	Regular	Early Bird	Regular	Early Bird	Regular
KSRT Senior or Student Members	\$50	\$65	\$50	\$65	\$65	\$95
KSRT Active or Associate A Members	\$100	\$120	\$100	\$120	\$180	\$200
Non-KSRT Members	\$180	\$220	\$180	\$220	\$325	\$365

Name: _____ Phone: _____

Email: _____

Mailing Address: _____
Street Address City State Zip Code

Silent Auction – All funds support the KSRT scholarships!

____ Yes, I will provide an auction item. If marked, please bring the item to convention or make arrangements with Toni Caldwell, mmcaldwell@aol.com.

KSRT will collect for Lexi's LAMB Foundation in Wichita, KS. Lexi's LAMB Foundation works with staff at Wichita hospitals to meet the needs of children and families, including providing support that helps bring a sense of comfort and normalcy to them. **Items of GREATEST need include coloring books, crayons/colored pencils, stuffed animals, card games (UNO, regular cards, etc.), and travel-sized hygiene products.**

Indicate days/events you plan to attend:

- ☐ Thursday (4.4.24) meet & greet + 1 free CE (no cost with Friday and/or Saturday registration)
- ☐ Friday ONLY (4.5.24) ☐ Attending the Friday (4.5.23) evening reception? Extra \$35/guest.
- ☐ Saturday ONLY (4.6.24)
- ☐ Friday and Saturday (4.5 & 4.6) ☐ Indicate dietary restrictions: _____

Indicate your membership status:

- ☐ Senior Member ☐ Active or Associate A Member
- ☐ Student Member ☐ Non-Member (join KSRT or show proof of out-of-state membership & pay Active rate)

Total Fee Enclosed: \$ _____ (see fee chart above to determine fee; note early bird date!)

Mail to: Denise Orth, KSRT Executive Secretary, 1702 Mermis Court, Hays, KS 67601

Make checks/money orders payable to KSRT. All cancellations and the refund of registration fees are subject to a vote by the KSRT Board of Directors. The Executive Secretary can be reached at ksrt.exsec@gmail.com.



Basic Schedule

*More details to come in a future ANODE and the ksrad.org website

Thursday, April 4

3:00pm-3:00pm	KSRT Executive Board Meeting
3:30pm-4:30pm	KSRT Full Board Meeting
6:30pm-7:00pm	Registration
7:00pm-8:00pm	Social – Meet & Greet
8:00pm-9:00pm	CE Presentation

Friday, April 5

7:15am-7:45am	Registration
7:45am-8:00am	Welcome
8:00am-9:00am	CE Presentation
9:00am-10:00am	CE Presentation and Student Written Test
10:00am-10:45am	Business Meeting #1
10:45am-11:15am	Vendor Break #1
11:15am-12:15pm	CE Presentation
12:15am-1:00pm	Lunch
1:00pm-2:00pm	CE Presentation
2:00pm-2:30pm	Vendor Break #2
2:30pm-3:30pm	CE Presentation
3:30pm-4:30pm	CE Presentation
4:30pm-5:30pm	Raybowl Competition
5:30-End	Business Meeting #2 – Awards*, Reception, and Silent Auction *Must be present to collect monetary awards

Saturday, April 6

7:15am-7:45am	Registration
8:00am-9:00am	CE Presentation
9:00am-10:00am	CE Presentation
10:00am-10:15am	Break
10:15am-11:15am	CE Presentation
11:15am-12:15pm	CE Presentation
12:15am-1:00pm	Lunch
1:00pm-2:00pm	CE Presentation
2:00pm-3:00pm	CE Presentation

Friendly Reminders:

- Room temperature can vary, and we will not have control over it. Wear layers to ensure your personal comfort.
- The schedule, speakers, and topics are subject to change. Category A or A+ approval is pending.
- Attendees must be present for the entire presentation to receive continuing education credit.
- Doors will be closed at the beginning of the presentation and remain closed throughout the presentation. Please be respectful of the speaker and do not enter the room while a presentation is in session.
- For accommodation requests or general questions, please contact Becky Dodge at becky.dodge@washburn.edu

KSRT RADIOGRAPH COMPETITION

The radiograph competition awards are open to members of the KSRT – students or radiologic technologists. The following rules govern the competition.

Essays, Images, and Scientific Exhibit entry forms are due by Feb. 15.

Please use the [KSRT Competition Application Form](#) to submit entries. Reach out to the Professional Development Committee with any questions or issues at ksrtprofdev@gmail.com.

Categories for the 2024 Annual Convention

- General: Lateral Hand, Plantodorsal Axial Calcaneus, Swimmers T-Spine
- Contrast: RAO Esophagus

ELIGIBILITY

- Any student radiologic technologist or radiologic technologist who is a member in good standing of the KSRT is eligible to compete. A copy of the KSRT membership card must accompany the application form.
- Entry deadline for the Radiograph Competition is **Feb. 15**.

*** Members of the Radiograph Competition Committee, the chair or members of the Professional Development Committee, and the judge assistants are not eligible to compete.**

IMAGE ELIGIBILITY

1. Only one radiograph per person per category is allowed.
2. No tomographic radiographs will be accepted.
3. Images must be in electronic form and submitted using the [Competition Application Form](#).
4. Any identifying name or marker **MUST** be masked. This includes the patient's name, the technologist's name and/or initials, and the name of the institution.
5. Right or Left markers must be clearly visible.
6. All images must be actual patients and ordered by a physician.
7. All radiographs must be taken following the close of the previous annual meeting and **before** the deadline.
8. All images must be submitted as a JPG to the online application form, and follow the file naming format: LastnameFirstname_ImageCategory.jpg.
9. All films must be submitted to the Professional Development Chairman by the deadline – Feb. 15. Any radiograph submitted after this date will be disqualified from the competition.
10. The online [Competition Application Form](#) must accompany each entry.
11. A copy of the KSRT membership card must accompany the application form. This card was sent via email when registering as a member by ksrt.exsec@gmail.com.

HOW TO COVER INITIALS

Films must have student or technologist initials on markers removed for judging purposes. Save the radiographs into a JPG format. Once it is in a JPG format you can open the image in Microsoft Paint or another photo editing software, and proceed to black out the initials using the paintbrush.

MOST INTERESTING CASE

Any imaging modality can be used to:

1. Demonstrate a rare disease or fracture
2. Demonstrate a common disease or fracture
3. Normal variants
4. Any other unusual findings

Each applicant must submit a **typed synopsis** detailing the following:

- Patient history
- Diagnostic finding
- Related imaging procedures
- Justification as to why the case should be awarded the most interesting case title

JUDGING OF CONVENTIONAL RADIOGRAPHS

- Three judges will be selected by the Professional Development Committee. It is suggested that two of the judges be radiologic technologists and the third a radiologist.
- Judges will award each radiograph points according to the given scales and without knowledge of the scores given by the other judges. Each judge will submit their scores to the Radiograph Competition Committee. The decision of the judges will be final. There will be one winner per category – no ties.
- There will be a total of 100 points possible scored by each judge for each radiograph in the following categories:
 - Technical Excellence (30 points possible) – Detail, density, contrast, radiation protection, collimation, and clarity of anatomical part to be demonstrated compared to the overlying anatomy.
 - Positioning (60 points possible) – Marking, alignment of the patient, centering of the anatomical part, proper demonstration of essential anatomy, evidence that proper positioning was achieved.
 - Imaging Processing Excellence (10 points possible) – Special attention to artifacts, condition of processing solutions, and anything detrimental to the finished radiograph.

JUDGING OF MOST INTERESTING CASE

- Three judges will rank the image(s) from 1-5. The image awarded the most points will be the winner. There will be no ties.

DISPLAY OF RADIOGRAPHS

- All qualified radiographs entered into the competition will be displayed to the membership during the course of the annual meeting. If this is not feasible, only the top three films in each division and category, and the recipient of the KSRT Outstanding Radiograph Award will be on display.

AWARDS

- A first-, second-, and third-place prize will be awarded for each category at the Presidential Banquet during the annual meeting.
- An outstanding radiograph award is given to the highest-scoring radiograph in the competition.
- Awards will be presented at the Presidential Banquet during the annual meeting.
- You must be in attendance at the convention and awards ceremony to accept the award.

KSRT ELECTRONIC SCIENTIFIC EXHIBIT

The scientific exhibit competition awards are open to members of the KSRT – students or radiologic technologists. The following rules govern the competition.

ELIGIBILITY

- Any student radiologic technologist or radiologic technologist who is a member in good standing of the KSRT is eligible to compete. A copy of the KSRT membership card must accompany the application form.
- Entry deadline for the Electronic Scientific Exhibit Competition is **Feb. 15**.

SCIENTIFIC EXHIBIT ELIGIBILITY

- Individuals may only submit one exhibit at the annual conference.
- Radiologic technologists and student radiologic technologists may not submit an exhibit entry together in either of the categories.
- The exhibit must be the original work of the individual and cannot be commercially prepared.
- Individual's name or school CANNOT be visible on the exhibit.
- All entries must be submitted as a PDF to the online application form, and follow the file naming format: LastnameFirstname_ScientificExhibit.pdf.
- The online [Competition Application Form](#) must accompany each entry.
- A copy of the KSRT membership card must accompany the application form. This card was sent via email when registering as a member by ksrt.exsec@gmail.com.

SCIENTIFIC EXHIBIT CONTENTS AND MECHANICS

1. Subject Matter
 - The individual chooses the subject matter of the exhibit.
 - The exhibit should speak for itself and not need additional explanation.
 - The subject should be pertinent to the radiologic sciences and may be supplemented by charts, descriptive material, photographs, etc.
 - Exhibits should demonstrate originality of subject matter, general interest and value from both practical and educational viewpoints, and technical excellence.
 - Exhibits should not show images or markings that could identify the patient, institution, or department.
 - Exhibits should not contain excessive written descriptions.

2. Requirements of Exhibit

General

- The purpose of the exhibit is to present your subject matter in a readable viewer-friendly format.
- People of varying degrees of experience will view the presentation, so remember to make points as complete and brief as possible.
- Successful exhibits achieve both coverage and clarity.

Format

- Exhibit must be digital and submitted as a PDF file. The file may not exceed 10MB. This exhibit will be displayed electronically.
- Exhibit dimensions need to be 48 inches by 36 inches with a landscape orientation.
- Use a clear, easy-to-read font style. A dark font on a light background is suggested.
- Avoid using font smaller than 24 points.

Content

- The poster display should have a title and content with commentary examples.
- Materials should convey clearly a statement of the problem, project objectives, methodology, significant outcomes, and conclusions.
- Use the AMA 11th Edition or APA 7th Edition style guide for technical presentations.
- Minimize the narrative. Use short, separate paragraphs.
- Numbered or bulleted lists can be a concise, effective way to convey a series of points.
- Material should be presented in a logical sequence.
- Your final conclusions should leave the observers focused on a concise statement of your important findings.

Visuals

- An exhibit display is a visual presentation and should include sufficient images.
- Visuals should enhance your display and should include informative captions.
- Consider the use of charts, drawings, photographs, and illustrations to add graphic impact.
- Use high-quality images. Copying images from the internet and pasting them to your document may result in pixelated or blurry images. Check the image's DPI (dots per inch) before including it on the exhibit.
- Keep the overall exhibit presentation clean and clear.

JUDGING

- The Professional Development Committee will select two or three judges who are radiologic technologists for the scientific exhibit competition. The decisions of the judges will be final and will be based on the following criteria:
 - Professional Value – Is the project of interest and practicality to technologists and students?
 - Educational Value – Does the project contain information enabling observation to be

an educational experience?

- o Originality of the Subject Matter – Does the project illustrate a new idea or present information in a new, innovative style?
- o Technical Quality – Is the material presented in a neat, well-organized, and creative manner?
- The following points will be awarded for each of the criteria:
 - Outstanding – 4
 - Above Average – 3
 - Average – 2
 - Below Average – 1

AWARDS

- A first-, second-, and third-place prize will be awarded at the Presidential Banquet during the annual meeting.
- Exhibits with the top three point values will be awarded first, second, and third place respectively. An average of 12 or more points must be achieved to be considered for an award.
- You must be in attendance at convention to accept the award.

KSRT ESSAY COMPETITION

KSRT is committed to recognizing excellence in scholarly writing by radiologic technologists and student radiologic technologists. The essay competition is open to members of the KSRT. The following rules govern the competition. **The following essay topics may not be used this year due to being awarded at the previous convention: Applications of Functional Neuroimaging for Traumatic Brain Injuries; Forensic Radiology: History and Current Implementation; and The Past, Present, and Future of Mammography.**

ELIGIBILITY

- Any student radiologic technologist or radiologic technologist who is a member in good standing of the KSRT is eligible to compete. A copy of the KSRT membership card must accompany the application form. This card was sent via email when registering as a member by ksrt.exsec@gmail.com.
- Entry deadline for the essay competition is **Feb. 15**.

MANUSCRIPT PREPARATION

Submitted manuscripts must meet the following requirements:

General Information

1. The length of the text should not exceed 15 pages including the title page, abstract, body, bibliography, and appendix if applicable.
2. The original (with author information) and one copy of the manuscript (without author information) must be submitted.
3. The manuscript must be submitted using the online [Competition Application form](#).

Title Page

1. This is a separate page, listing the title of the manuscript, author's name, author's permanent home address, and telephone number, as well as, their institution name and telephone number. The title page should be attached to **only the original copy**.
2. To ensure a blind review, the author's name and any other identifying information must not appear anywhere else in the manuscript.

Abstract

1. Generally should not exceed 75 words, and the abstract should summarize significant information in the text.
2. This is best written after the paper is complete.

References

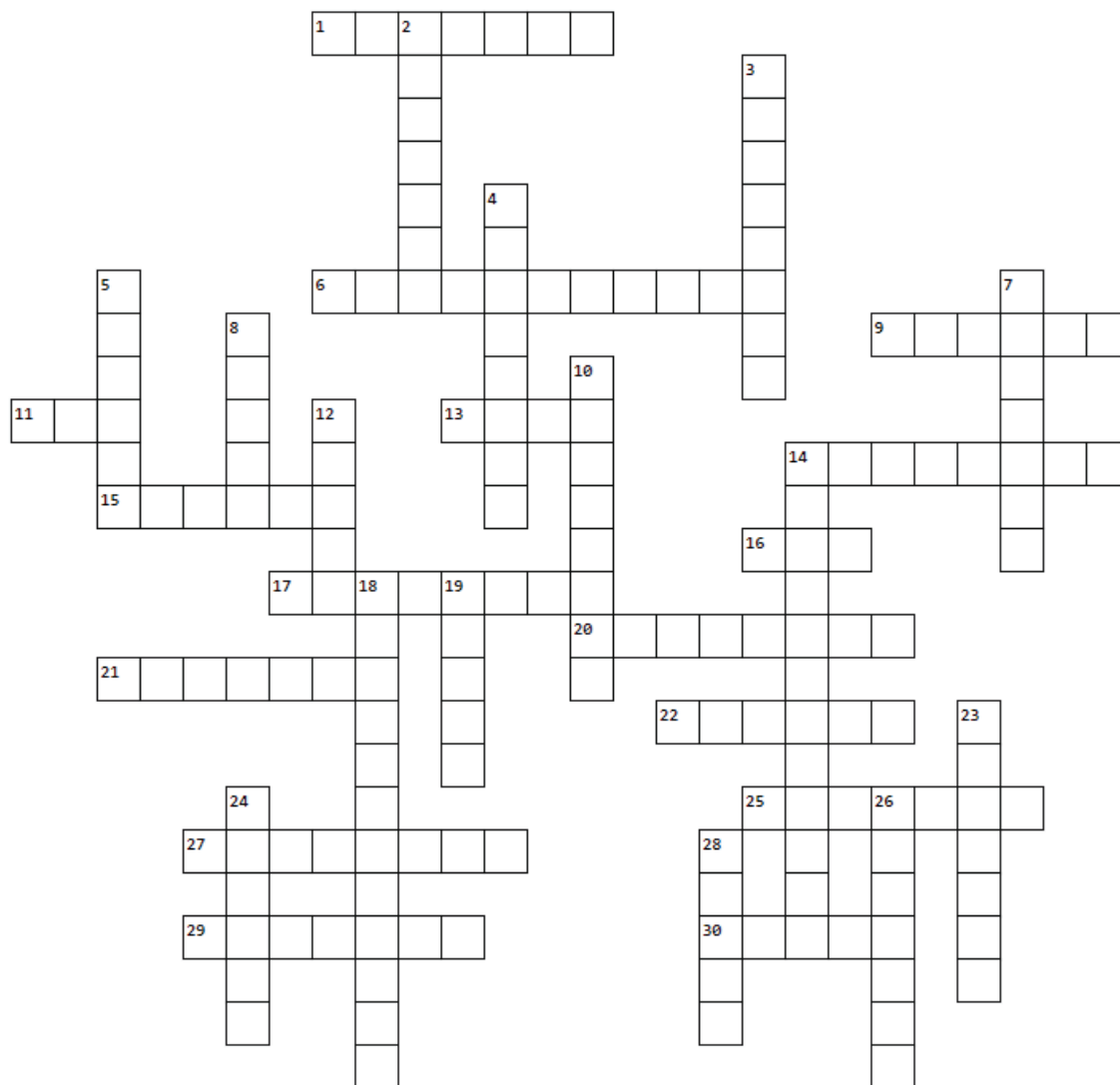
1. References must follow the APA 7th Edition, AMA 11th Edition, or MLA 9th Edition style format.
2. All non-original artwork, drawings, and photos should be referenced on an individual page.

JUDGING

- Three judges will be selected by the Professional Development Committee. One judge must be a registered radiologic technologist and one judge should be an English professor or teacher.
- Manuscripts will be evaluated with the following criteria:
 - Originality, educational/technical value, and scholarship (65%)
 1. Evidence of original work performed by the author.
 2. Evidence of novel, unique, or unprecedented approach to the topic.
 3. Contributes to higher radiological standards.
 4. Updates, expands, or enhances existing knowledge.
 5. Mastery of subject matter.
 6. Research of literature.
 - Organization of material and mechanics (35%)
 1. Is the material orderly and presented in a logical sequence?
 2. Are drawings or illustrations used to support or promote understanding of the text?
 3. Does the paper follow manuscript guidelines?
 4. Is the evidence of proper grammar, spelling, and punctuation?

AWARDS

- A first-, second-, and third-place prize will be awarded.
- Awards will be presented at the Presidential Banquet during the annual meeting.
- You must be in attendance at convention and awards ceremony to accept award.



Across

1. Discovered X-rays
6. Lowers patient dose
9. Part of Vertebra
11. directly proportional to the average energy of X-ray produced
13. Calcaneus
14. Smuggler's Fossa
15. Used to intensify the effect of x-ray photon
16. Measure of Radiation produced
17. Towards the head
20. View to see apices
21. Palm down
22. Part of the stomach
25. Hip view
27. Dividing into right and left
29. Positive
30. Tarsal bone

Down

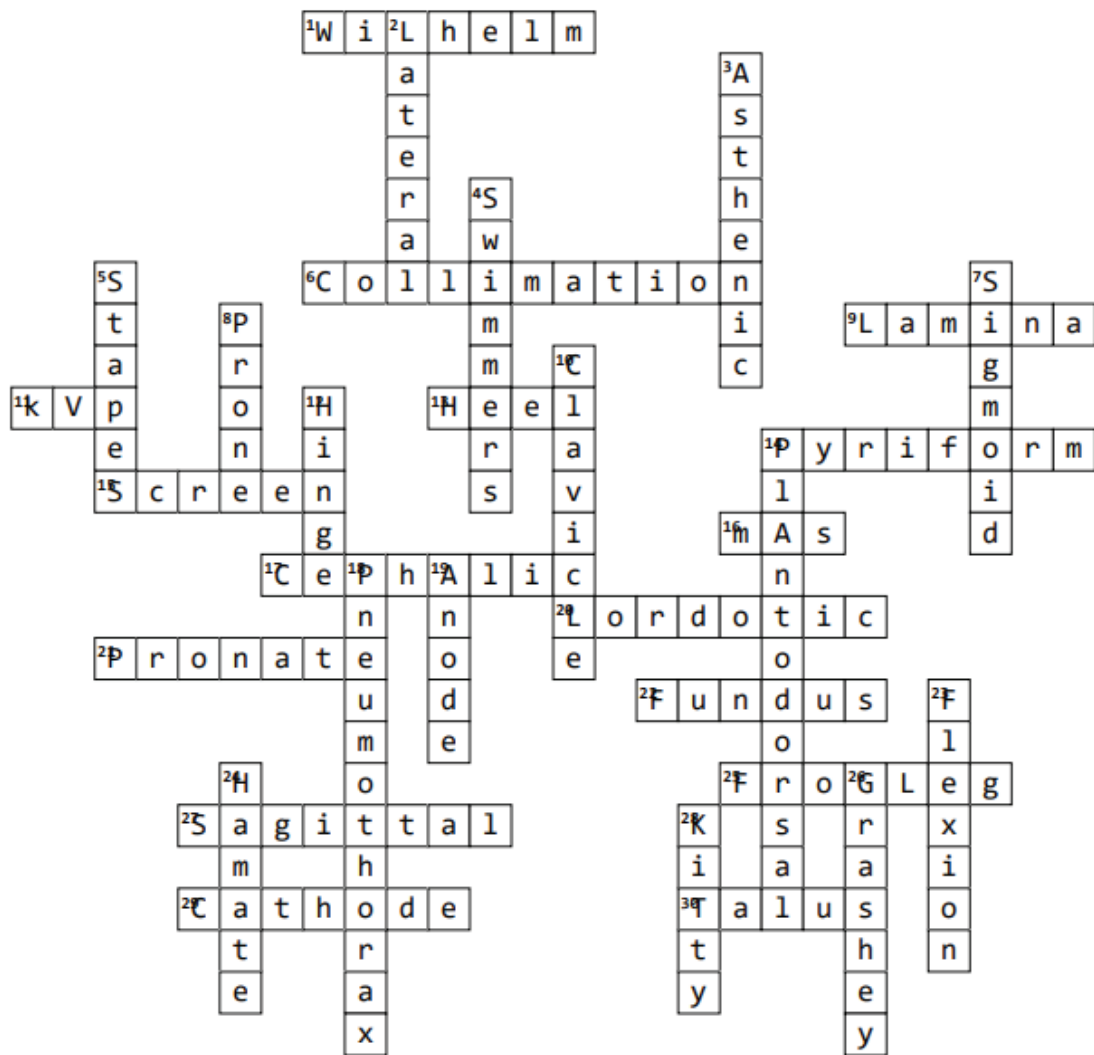
2. Side view
3. Body Habitus
4. cervicothoracic view
5. Smallest bone in human body
7. Part of colon
8. Face down
10. Most commonly broken bone
12. Elbow joint
14. Heel projection
18. Most frequent complication of central line insertion
19. Negative
23. To decrease the angle between parts
24. Carpal bone
26. True AP
28. She standardized Radiographic techniques

N I E M U N R E T S Y A P O Y
 O G S N S U I D A R R U E R H
 I S Q O I Q J U A A A L L T P
 T E C Q T P D L L G D T V H A
 U U D A T O U A N T E R I O R
 L Q P F P P P S M M C A S P G
 O I V O A U W E P A U S D E O
 S L M C S A L Y R R B O E D M
 E B S U T T H A O G I U M I M
 R O N E I D E S N O T N C C A
 I I R Z W R U R E R U D U D M
 S S N O U P A Y I U S S N Z B
 M G B M I Y D B G O C A R M V
 X L E N C E U E S I R N U S Y
 E F E D I F F U S I O N Q D W

ALARA
 Carm
 Elbow
 Mammography
 Orthopedic
 Prone
 Scapula
 Sternum
 Supine
 Waters

Anterior
 Decubitus
 Femur
 NucMed
 Pelvis
 Radius
 ScapularY
 Sunrise
 Ultrasound

Barium
 Diffusion
 Isotope
 Oblique
 Posterior
 Resolution
 Sinus
 Supine
 Urogram



N I E M U N R E T S Y A P O Y
 O G S N S U I D A R R U E R H
 I S Q O I Q J U A A A L L T P
 T E C Q T R D L L G D T V H A
 U U D A T O M A N T E R I O R
 L Q R F R P P S M M C A S P G
 O I V O A U W E P A U S D E O
 S L M C S A L Y R R B O E D M
 E B S U T T H A O G I U M I M
 R O N E I D E S N O T N C C A
 I I R Z W P U R E R U D U D M
 S S N O U P A Y I U S S N Z B
 M G B M I Y D B G O G A R M V
 X L E N C E U E S I R N U S Y
 E F E D I F F U S I O N Q D W

KSRT Membership

powered by..... **memberplanet**

Membership categories include:

Active, Active Military,
Associate A, Radiologist Assistant,
Senior & Student

We have a category for everyone!
You can renew your membership,
join for the first time or rejoin if
your membership has lapsed.

The KSRT is your professional voice
in Kansas...be part of that voice
in matters that concern you!!

Go to ksrad.org, click on the membership
tab for a quick link to join.

**Browse the updated look on
ksrad.org**

Reorganized for ease of use!!



KANSAS SOCIETY OF RADIOLOGIC TECHNOLOGISTS

Scholarship Application Checklist

- Kansas Society of Radiologic Technologists member
 - Scholarship application
 - Essay.
- Students: Official transcript in a sealed envelope and letter of recommendation from clinical instructor or other supervising technologist.
- Technologist: Copy of ARRT card and letter of recommendation from a radiology technology colleague.
- All materials should be in one envelope and postmarked by Feb. 1.
 - Mail to:
Denise Orth, RT(R)(M), FKSRT
KSRT Executive Secretary
1702 Mermis Ct.
Hays, KS 67601
- Winners will be notified and must attend the Kansas Society of Radiologic Technologists Spring Convention to receive the scholarship.



KANSAS SOCIETY OF RADIOLOGIC TECHNOLOGISTS

Scholarship Application

Deadline is Feb. 1

I. Applicant Certification

I certify that I am a U.S. citizen, U.S. national or U.S. permanent resident, that this application information provided is true and correct to the best of my knowledge. I understand that any false statements made herein will void this application, and I will be ineligible for support from the KSRT Scholarship Fund. I hereby authorize the release of all information contained in this application packet as may be required to determine my eligibility for a scholarship. I hereby waive my rights to review any documents pertaining to my scholarship application once submitted.

Signature of Applicant

Date

II. KSRT Member

I am a member. Years of membership _____

I am sending in my membership now.

III. Personal Information

Mr. Ms. Name _____
Last First MI

Mailing Address _____
Number/Street (Apt#) City State Zip

E-mail _____

Phone (_____) _____

ARRT Certifications _____ ARRT #: _____

IV. Educational Information

Radiologic Science Program _____
Name of Institution City/State

Program Director _____

Email Address _____ Phone (_____) _____

Anticipated Graduation date _____ / _____ GPA _____
Month Year

Program Type

- ☐ Certificate Program
- ☐ Associate degree program
- ☐ Bachelor's program

Area/Concentration

- ☐ Medical Imaging
- ☐ Nuclear Medicine
- ☐ Vascular
- ☐ Radiation Therapy
- ☐ Sonography
- ☐ Other _____

V. Letter of recommendation

Name: _____

Position: _____

Email address: _____

VI. Essay

Please provide a one-page typed essay describing why you deserve this scholarship. For objectivity purposes, do not include any statements that would identify your school/instructors or yourself. The essay shall be 12 point font Arial with single spacing and 1-inch margins.

Applications will not be considered if not complete. Please submit application and transcript to:
Denise Orth, KSRT Executive Secretary
1702 Mermis Ct., Hays, KS 67601

ADDRESS SERVICE REQUESTED

KANSAS SOCIETY OF
RADIOLOGIC TECHNOLOGISTS
1702 MERMIS CT.
HAYS, KS 67601



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