

The Rotating Anode

SPRING 2023



President Denise Orth and Professional Development Chair Tara Rohn drop off donations at the Community Assistance Center in Hays after the 2023 KSRT Annual Convention. The donations were collected as part of a service project.

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KSRT BOARD OF DIRECTORS

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President

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Gale Brown, EdS, RT(R)(CT)
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Area Representative, Central

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KSRT COMMITTEE CHAIRS AND APPOINTMENTS

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Nominations

Vacant

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Interested in contributing to
the *Anode*?

Contact: Jen Smith

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(Please put *Anode* in the subject
line)

Official Publication of the
Kansas Society of Radiologic
Technologists

Denise Orth, Executive Secretary
1702 Mermis Ct.
Hays, KS 67601

EXECUTIVE COMMITTEE MEETING MINUTES

9:30 a.m. Jan. 21

Via Zoom meeting

Voting members present: Harmony Ibarra, chair of the board; Katilyn Slaton, immediate past president; Gale Brown, president.

Call to order: Harmony called the meeting to order at 9:30 a.m.

Approval of minutes: Gale moved and Katilyn seconded the motion. Motion passed.

Financial report: Denise presented the financial report through Jan. 18. The report showed income of \$11,644.64 and expenses of \$12,376.50. The net worth report showed a checking account balance of \$8,981.74 and certificates of deposit worth \$45,380.77 for a total net worth of \$54,362.51. Katilyn moved to accept the financial report as presented and Gale seconded the motion. Motion passed.

Old business:

Revised job descriptions: Updated. All good.

ASRT Affiliate MyHub Portal: Gale has done affiliate documents, upload liability insurance, sections to upload. The president, executive secretary, and president-elect will have access.

BOARD OF DIRECTORS MEETING MINUTES

10 a.m. Jan. 21

Via Zoom

Voting members present: Gale Brown, president; Denise Orth, president-elect and executive secretary; Katilyn Slaton, immediate past president and professional development vice chair; Jason Elliott, secretary-treasurer; Harmony Ibarra, chair of the board; Tara Rohn, professional development chair; Kelly Denton, western area representative; Kyle Ibarra, central area representative and historian; Becky Dodge, education co-chair; Kirsten Oswald, director at large; Toni Caldwell, ASRT senior delegate and legislative chair.

Non-voting member present: Melinda Chiroy, scholarship chair.

New business:

2023 proposed budget: Discussed the process.

1861 Consulting: Letter concerning the financial situation at 1861 Consulting. Toni did research and reached out to Derek Hein. Ron Hein took a lien out on the company, and clients received the letter before Derek found out. He paid the lien off and our process will not change.

1861 contract: Up for renewal and addendum. The addendum states we are in monitoring mode. When legislation is needed the contract easily can be changed to the regular contract.

Licensure: The language on the CEU requirement was changed to be exactly like the ARRT. The Kansas Board of Healing Arts will check the ARRT for compliance. BOHA paid for the changes and it passed.

Announcements:

Toni gave \$100 memorial to the Kidney Foundation in memory of Ron Hein.

The next meeting will be at 3 p.m. March 30.

Adjournment: Gale moved to adjourn and Katilyn seconded the motion. Meeting adjourned at 10 a.m.

Call to order: Gale called the meeting to order at 10:01 a.m.

Quorum: Jason established a quorum.

Approval of the consent agenda: Harmony moved to accept the consent agenda, Toni seconded, motion passed.

Approval of minutes: Toni moved to accept the minutes from the September meeting, Melinda seconded, motion passed.

Reports: Board of directors reports were emailed to members before the meeting.

A NOTE FROM THE PRESIDENT

Greetings!!

The theme for the 2023 KSRT convention was Our Work Matters!

The convention was a huge success this year! It was wonderful to have technologists and students gather together to listen to awesome speakers and explore the many vendor tables. The convention was a culmination of an extraordinary amount of work by the Education Committee Co-Chairs Becky Dodge and Shanna Bennett and Vendor Chair Kelly Denton. Professional development committee members Tara Rohn and Katilyn Slaton managed the image competitions, scientific exhibits, and Ray Bowl competitions.

Notable individuals who stepped up to assist were: Kirsten Oswald, Toni Caldwell, Jen Smith, Melinda Chiroy, Dixie Copeland, Mandy Meyers, Lisa Dinkel, and Zoey Harrison. Your willingness to be part of the convention was key to making it such a success.

I am excited for the 2023-24 KSRT year as the board has several new members as well as returning members. The lifeblood of our society is the members who join the board to further the mission of the KSRT. The KSRT board will continue efforts to support our members, technologists and students to advance our profession. Keep posted to *The Rotating Anode* and ksrad.org for news and updates as the year progresses.

Always remember ... Our Work Matters!!

— Denise Orth,
MS, RT(R)(M), LRT
KSRT President

Continued on Page 4

Financial report: Financial reports were available to board members before the meeting. Denise reviewed the financial report with the board. Toni moved to approve the financial report, Harmony seconded, motion passed.

Old business:

ASRT: KSRT received an award from the ASRT Financial Assistance program, and the board discussed the use of those funds. Two Fort Hays State University students were accepted to the ASRT Student Leadership Development Program. The board discussed inviting both students to the 2023 KSRT Annual Convention as guests and what fees to waive. Harmony moved to invite those two as guests to the annual convention and waive all fees, Toni seconded, motion passed. The board discussed completing the ASRT Affiliate Delegate paperwork.

New business:

Proposed budget: Denise presented the 2023-24 proposed budget, and the board provided input on the income and disbursements. Toni moved to accept the proposed budget, Kelly seconded, motion passed.

1861 Consulting: Toni presented information regarding renewal of the 1861 Consulting contract to monitor legislation. Toni moved to accept the new contract, Becky seconded, motion passed.

ASRT email blasts: The board discussed how to best utilize the complimentary ASRT email blasts and decided to use two for the annual convention and one for a membership drive.

Board positions: Denise discussed board positions and encouraged board members to progress to new positions so as to open positions that do not require previous time on the board.

Board of Healing Arts: Toni reported that the Kansas State Board of Healing Arts now is following the ARRT standards for continuing education credits.

Scholarships: Melinda sent the scholarship application to schools by email twice, but only one school acknowledged receiving it. The due date for scholarship applications was Feb. 1. The application for the selection for student representatives was due in March. Denise is going to draft a letter to send to program directors and recommends a March 1 deadline. The letter also would include information on the selection of three student interns.

Service project: The board discussed the Community Assistance Center as the community service project. Denise will notify them and invite them to pick up donations.

Annual convention: Becky provided an update on the annual convention planning. Denise is going to update the scripts for the convention board meetings. The executive board will meet at 3 p.m. March 30 with full board to follow at 3:30. The board discussed and agreed on a video doorbell as the raffle prize. Harmony made a motion to purchase a video doorbell as the raffle prize for the 2023 KSRT Annual Convention, Toni seconded, motion passed.

Other business: A KSRT member reached out to Denise asking if high school students interested in the profession could attend the KSRT Annual Convention. The board discussed what fees would be appropriate for the high school students to attend. Denise made a motion to contact Judy Lynch and notify her that the fee for high school students wanting to attend is \$40 per student, Toni seconded, motion passed.

Announcements:

The deadline for *The Rotating Anode* was Feb. 6.

The pre-convention board meeting will be at 3:30 p.m. March 30 at the Hilton Garden Inn in Hays, and the executive committee will meet at 3 p.m.

Adjournment: Toni moved to adjourn the meeting, Harmony seconded, motion passed. The meeting was adjourned at 11:52 a.m.

Convention winners

Ray Bowl

Top Written Score: Payton Lee, Fort Hays

First place team: Labette (Kimberly Lewis, Kelsey Stringer, Clayton Romans)

Second place (tie): Cleveland (Dakota Scoby, Alayna Collins, McKenzie Koher) and Washburn (Hannah Mumpower, Jamie Willis, Nicolas DeTurk)

Third place (tie): Fort Hays (Payton Lee, Ashlyn Cole, Hannah Jones) and Newman (Kevin Harrington, Kaycie Bay, Zachary Myers)

Image competition winners

Lateral elbow: Tati'Yana Holder, Washburn; Ashlyn Cole, Fort Hays; Tristen Currie, Washburn

Odontoid: Ashlyn Cole, Fort Hays; Nautica Hart, Labette; Halie Honeyman, Washburn
Sunrise patella: Taiyler Atwill, Fort Hays; Sophia Darnell, Washburn; Sydney Kerstiens, Washburn

Right lateral stomach: Caroline Wong, Washburn

Most interesting case: Kali Weber, Fort Hays

Essay competition

First place: Sophia Darnell, Washburn, "Applications of Functional Neuroimaging for Traumatic Brain Injuries"

Second place: Kevin Harrington, Newman, "Forensic Radiology: History and Current Implementation"

Third place: Katherin Lednicki, Washburn, "The Past, Present, and Future of Mammography"

Scientific exhibit competition

First place: Michaela Falley, Washburn, "Assessing Gunshot Wound Trauma with Radiology"

Second place: Cara Meyers, Washburn, "Post Mortem Imaging: A More Dimensional Understanding of Death"

Third place: Abby Barnes and Allison Kruse, Fort Hays, "Multimodality Image Fusion"

Image competition categories for 2024

General radiograph: Lateral hand, plant-odorasal axial calcaneus, Swimmers thoracic spine

Contrast radiograph: RAO esophagus

ANNUAL MEETING MINUTES

March 31

Hilton Garden Inn, Hays

First Business Session

Call to Order: The 86th annual meeting of the KSRT was called to order at 10:13 a.m.

Introduction of the board of directors:

Chair of the board: Harmony Ibarra

Immediate past president: Katilyn Slaton

President-elect and executive secretary: Denise Orth

Vice president: Lisa Eddy

Secretary-treasurer: Jason Elliott

Director at large: Kirsten Oswald

Professional development chair: Tara Rohn

Professional development vice chair: Katilyn Slaton

Education co-chairs: Becky Dodge and Shanna Bennett

Senior ASRT delegate/legislative chair: Toni Caldwell

Student representative: Zoey Harrison

East area representative: vacant

West area representative: Kelly Denton

Central area representative/nominations chair: Kyle Ibarra

Media coordinator and editor of *The Rotating Anode*: Jen Smith

Recognition of past presidents: All past presidents were asked to please stand and be recognized.

There was a moment of silence for members who passed this year.

Process for the meeting: Agenda documents were shared on the overhead screen. Hard copies of the financial report, proposed budget, and minutes from the 2022 annual convention were provided to members.

Sergeant-at-arms: The chief sergeant-at-arms was Kyle Ibarra. He reported there were 96 members in the room and 128 pre-registered voting members. Thirty-six members were needed for a quorum, so the quorum was met. Members were directed to bring a completed motion form to the second business session if they wished to bring an item before the membership for discussion.

Financial report: Denise presented the financial report. Gale presented the proposed budget. There were no objections to approving the governance report from the membership; the report was adopted.

Reports from each officer and committee were printed in the packet. The membership did not have additions or corrections to the report, and no questions were asked.

Nominations: Nominations for president-elect, vice president, secretary-treasurer, and director at large were open.

President-elect: Toni Caldwell

Vice president: Harmony Ibarra

Secretary-treasurer: Shanna Bennett

Director at large: Jeskan McGovern

Gale called for additional nominations, and none were presented, so nominations were closed. Denise stated that all nominees meet the qualifications for their potential offices. All nominees stated they have read the officer qualifications and

duties of the office. Each nominee presented a brief statement to the membership.

As there was only one nominee per office, Gale called for a voice vote. Approval was unanimous.

Gale announced that the new board of directors would meet following the close of the silent auction after the second business meeting.

New business:

No floor motions were presented.

Image categories: The categories were displayed on screen, and the membership was directed to vote for one contrast media study and three general. Other competitions include the most interesting case, scientific exhibit, and award of merit paper competitions.

Announcements:

The image competition voting forms were in the packet and would be collected at the beginning of lunch. The membership was encouraged to visit the exhibits, sponsoring vendors, purchase raffle tickets, bid on silent auction items, and collect items for the service project, the Community Assistance Center for Allen County.

Recess was declared at 10:36 a.m.

Second Business Session

Call to order: The second business session was called to order at 5:24 p.m.

Professional development awards: Tara Rohn announced the competition winners.

Ray Bowl:

First: Labette (Kimberly Lewis, Kelsey Stringer, Clayton Romans); second (tie): Cleveland (Dakota Scoby, Alayna Collins, McKenzie Koher) and Washburn (Hannah Mumpower, Jamie Willis, Nicolas DeTurk); third (tie): Fort Hays (Payton Lee, Ashlyn Cole, Hannah Jones) and Newman (Kevin Harrington, Kaycie Bay, Zachary Myers).

Top written Ray Bowl score: Payton Lee, Fort Hays.

Radiographs:

Lateral elbow: First, Tati'Yana Holder (Washburn), second, Ashlyn Cole (Fort Hays); third, Tristen Currie (Washburn).

Odontoid: First, Ashlyn Cole (Fort Hays); second, Nautica Hart (Labette); third, Halie Honeyman (Washburn).

Sunrise patella: First, Taiyler Atwill (Fort Hays); second, Sophia Darnell (Washburn); third, Sydney Kerstiens (Washburn).

Right lateral stomach: First, Caroline Wong (Washburn).

Most interesting case: Kali Weber (Fort Hays).

Scientific exhibit: First, Michaela Falley, Washburn, "Assessing Gunshot Wound Trauma with Radiology"; second, Cara Meyers, Washburn, "Post Mortem Imaging: A More Dimen-

Continued on Page 6

sional Understanding of Death”; third, Abby Barnes and Allison Kruse, Fort Hays, “Multimodality Image Fusion.”

Essay: First, Sophia Darnell, Washburn, “Applications of Functional Neuroimaging for Traumatic Brain Injuries”; second, Kevin Harrington, Newman, “Forensic Radiology: History and Current Implementation”; third, Katherin Lednicki, Washburn, “The Past, Present, and Future of Mammography.”

Scholarships: Melinda Chiroy presented scholarships to Jamie Willis, Washburn, and Helen Puett, Fort Hays.

Membership awards: Katilyn Slaton presented membership awards.

10 years: Harmony Ibarra, Kyle Ibarra

15 years: Tiana Bishop, Melinda Chiroy, Kelly Denton, Megan Rucker

25 years: Lisa Dinkel, Fredrick Knoepfel, Ronald Post

30 years: Pamela Jacquinet, Lori Porubsky

40 years: Elaine Becker

Gale presented Harmony with her plaque for serving as chair of the board. Harmony presented Gale with her plaque for serving as president.

Installation of officers: Gale installed the new officers, and each officer was presented with a KSRT pin.

President: Denise Orth

President-elect: Toni Caldwell

Vice president: Harmony Ibarra

Secretary-treasurer: Shanna Bennett

Director at large: Jeskan McGovern

Announcements:

- The 87th annual meeting will be April 4-6 at the Drury Plaza Hotel Broadview in Wichita.
- Ashton Kahrs will be appointed as student representative.
- The silent auction would end at 7 p.m. and payment is accepted by cash or PayPal.
- Film competition categories for 2024 are lateral hand, plantodorsal axial calcaneus, swimmers thoracic spine, and RAO esophagus.

Adjournment: The meeting of the KSRT was adjourned at 6:51 p.m.

Save the date!!

2024 KSRT Annual Convention

Date: April 4-6

Location: Drury Plaza Hotel Broadview, 400 W. Douglas, Wichita

APPLICATIONS OF FUNCTIONAL NEURO-IMAGING FOR TRAUMATIC BRAIN INJURIES

By Sophia Darnell, Washburn University
First-place essay

Abstract

During the past five decades, immeasurable advancements have been made pertaining to studies of the brain and its functions. Brain function can be mapped through functional neuroimaging such as a functional magnetic resonance imaging (MRI) or a positron emission (PET) scan. By utilizing these scans, researchers and doctors are able to have a multifaceted approach to traumatic brain injury and disease processes which affect the brain. These neuroimaging tools, their functions, and their applications to diagnostic processes of brain injury are mapped out further in the following paper.

In 2015, the sports drama “Concussion” premiered, and it showcased the research of Dr. Omalu, a pathologist who conducted research into the connections of chronic traumatic encephalopathy, or CTE, with professional football players. Chronic traumatic encephalopathy is categorized as an mTBI or mild traumatic brain injury, caused by multiple traumas to the head. Currently the only definitive path for diagnosis of CTE occurs during autopsy. However, with advancements in functional neuroimaging such as functional MRI (fMRI) scans and PET scans, developments have been made to assist future diagnosis, treatment, and prognosis of patients who encounter CTE and other traumatic brain injuries.

While MRI is the modality of choice for brain and soft tissue scans, fMRI is able to go a step further by showing brain activity during scans. Under this method, brain activity can be tracked

by measuring changes in blood flow to the brain. To understand how the brain tracks activity, the physiology behind brain activity first must be noted.

The brain controls memory, thought, emotion, and essentially every process which regulates the body. How one understands, processes, and responds to the world around them is function of the brain. This vast net of responsibilities is carried out with the help of cells called neurons that act as messengers between the body and brain in the central nervous systems. Neurons form pathways which send signals throughout the brain and central nervous system. These pathways in turn help control motor and sensory functions. However, like all other cells in the body, neurons utilize sugar for energy. Because oxygen also is used for this breakdown, the brain requires oxygen-rich blood to aid in replenishing this energy. When energy is required, it causes an increase of blood flow to the parts of the brain with neural activity present. Because hemoglobin also contains trace amounts of iron, this marginal increase in iron results in slightly more magnetic areas of the brain. Thus, when activity is found in the brain, researchers are able to localize the areas of a brain where the neural pathways are firing and to what extent they are firing based on the levels of magnetism represented. This activity is referred to as BOLD activity, or blood-oxygen-level-dependent activity.

fMRI has created a vast understanding in the understanding of brain function. For one, fMRI is able to do studies of the brain without exposing participants to harmful doses of radia-

tion, and it helps to determine locations of brain activity more accurately. Since the development of fMRI, tracking early stages of Alzheimers has become far easier. This gives patients with nearly undetectable symptoms of the disease an advantage in treatment before the disease progresses. In addition to this, the emergence of functional neuroimaging such as fMRI can give useful information about the injured brain and has provided extensive possibilities in how to recognize, treat, and understand traumatic brain injuries.

A traumatic brain injury, commonly referred to as a TBI, results from damage to the brain in the form of “bruising, torn tissues, bleeding and other physical damage to the brain” according to the Mayo Clinic (Mayo Foundation). This can present itself as either mild or severe damage. Mild damage can arise from a blow or jolt of the head and typically has temporary effects before subsiding. According to psychologist John Medaglia from the University of Pennsylvania, the United States population is experiencing TBIs at an “epidemic scale, with nearly 2.8 million new TBI-related medical visits per year” and a resulting 50,000 deaths (Medaglia). While the survival rate for TBIs is high, Medaglia notes that a large fraction of patients live with a degree of cognitive loss and/or psychiatric disturbance following their injuries. He also notes that brain injuries have a wide variability and typically present uniquely. This poses an interesting feat to doctors who aim to return patients to their pre-trauma baseline state of consciousness. As of now, fMRI is a fairly new resource available to researchers and physicians. Efforts are being made for fMRI to aid in making the prognosis of whether a patient may fully recover from their TBI, as well as the length of time needed for a full recovery.

Another important modality at the forefront of functional neuroimaging is positron emission tomography, or PET scanning. PET scans have been used dating back to the 1900s to facilitate a higher understanding of brain function, both normal and abnormal. Positron emission tomography (PET) is a “molecular imaging modality that has high

sensitivity for detecting even very small molecular changes” (Huang). PET utilizes radioactive tracers in order to measure molecular biological processes in the brain from a quantitative standpoint. PET tags a radioactive isotope to a “physiologically relevant molecule” and, after introduction of the isotope to the body, uses radiation detectors to locate and quantify the tagged molecules (Byrnes). Similarly to fMRI, functional PET scans use the brain’s utilization of glucose to its advantage. The radiopharmaceutical fluorine-18 FDG (fluorodeoxyglucose) mimics sugar and is taken to the corresponding areas of use in the brain that sugar would be carried to during neural activity (Huang). This allows PET to map brain function and corresponding neural activity as needed.

Currently, the best approach to traumatic brain injury diagnosis and recovery comes from a multifaceted approach. While medical imaging plays a key role in this approach, it is far from the sole member. To assume that fMRI or PET scanning alone could diagnose TBIs also would assume the relationship between neural activity and blood flow to neural tissue is predictively correlated to the occurrence and severity of certain types of brain injuries. However, because brain injuries present themselves so varied and uniquely, they must be assessed from all angles, some more subjective than quantitative, such as the occurrence of depression or mood swings. In coming years, as further research is conducted into the functions of the brain, including injured or diseased brains, progressive changes to care paths should be seen in which functional neuroimaging is utilized.

Summary

While neuroimaging and functional neuroimaging are both newer additions to the medical field, they show promising results toward the advancements of disease and injury to the brain. By using the brain’s functional properties of neural activity, mapping can be done through magnetic resonance or radiopharmaceutical imaging to show various sites of brain activity or the lack thereof. This can be used to

diagnose the severity of brain trauma. It is expected to close the gap between understanding and application of prognosis of brain injuries and corresponding recovery times. As medicine moves forward, research can be expected to dive further into ways to be more proactive in diagnosis and care for brain injuries both severe and mild. Imaging professionals can be expected to play an exciting role in this.

Works Cited

- Amanamba, U., Sojka, A., Harris, S., Bucknam, M., & Hegde, J. (2020, November 4). *A window into your brain: How fmri helps us understand what is going on inside our heads*. *Frontiers for Young Minds*. Retrieved October 13, 2022, from [https://kids.frontiersin.org/articles/10.3389/frym.2020.484603#:~:text=fMRI%20detects%20brain%20activity%20by,dependent%20activity%20\(BOLD%20activity\)](https://kids.frontiersin.org/articles/10.3389/frym.2020.484603#:~:text=fMRI%20detects%20brain%20activity%20by,dependent%20activity%20(BOLD%20activity)).
- Byrnes, K. R., Wilson, C. M., Brabazon, F., von Leden, R., Jurgens, J. S., Oakes, T. R., & Selwyn, R. G. (2014, January 9). *FDG-PET imaging in mild traumatic brain injury: A critical review*. *Frontiers in neuroenergetics*. Retrieved October 13, 2022, from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3885820/>.
- Huang, C.-X., Li, Y.-H., Lu, W., Huang, S.-H., Li, M.-J., Xiao, L.-Z., & Liu, J. (2022, January). *Positron emission tomography imaging for the assessment of mild traumatic brain injury and chronic traumatic encephalopathy: Recent advances in radiotracers*. *Neural regeneration research*. Retrieved October 13, 2022, from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8451552/>.
- Mayo Foundation for Medical Education and Research. (2021, February 4). *Traumatic brain injury*. Mayo Clinic. Retrieved October 13, 2022, from <https://www.mayoclinic.org/diseases-conditions/traumatic-brain-injury/symptoms-causes/syc-20378557>.
- Medaglia, J. D. (2017, August 24). *Functional neuroimaging in traumatic brain injury: From nodes to networks*. *Frontiers in neurology*. Retrieved October 13, 2022, from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5574370/>.



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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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