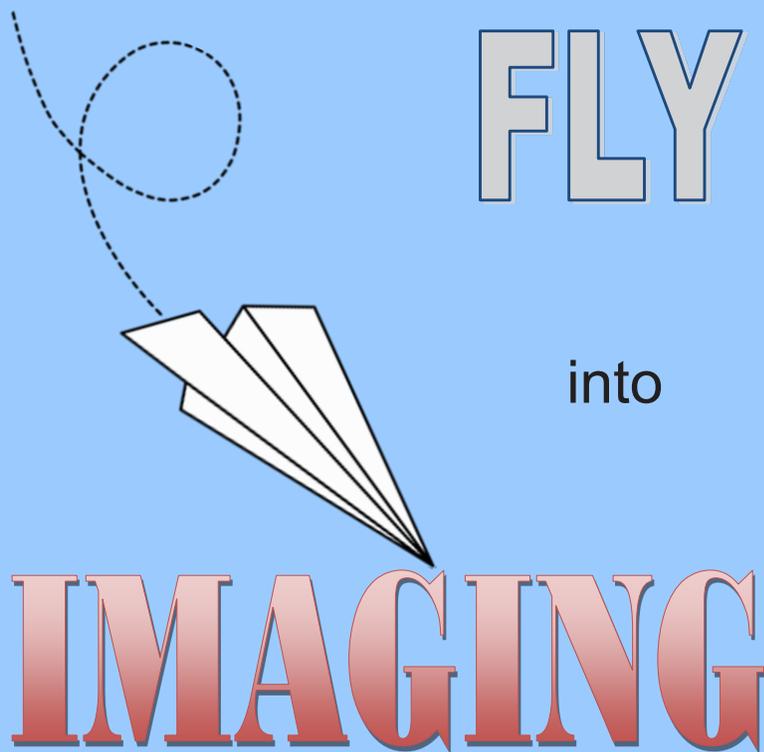


# The Rotating Anode

WINTER 2019



82ND ANNUAL KSRT CONVENTION

MARCH 29-30, 2019

BEST WESTERN NORTH

WICHITA, KS

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## KSRT BOARD OF DIRECTORS

### Chair of the Board

Jen Smith, BSJ, BS, RT(R)(M)(CT)  
jen.smith.rtr@gmail.com

### President

Toni Caldwell, BA, RT(R)  
mmcaldwell@aol.com

### Past President

Brian Ralph, RPA, RA, RT(R)  
bralph@eaglecom.net

### President-Elect

Ronda Sunnenberg, RT(R)  
ronda.sunnenberg@yahoo.com

### Vice President

Dawn Williams, RT(R)  
dawnwilliams08@gmail.com

### Secretary-Treasurer

Harmony Ibarra, RT(R)(CT)  
hiradct@gmail.com

### Director at Large

Kenny Rounkles, RT(R)  
karounkles@mail.fhsu.edu

### Education Chair

Megan Rucker, Ms.Ed., LRT(R)(M)(CT)  
meganrucker86@gmail.com

### Professional Development Chair

Katilyn Slaton, BS, RT (R)(MR)(CT)  
kmkurtz@mail.fhsu.edu

### ASRT Senior Delegate

Melinda Chiroy, RT(R)(T)(CT)  
melindachiroy@yahoo.com

### Area Representative, West

Judy Lynch, MSRS, RT(R)(M)(QM)  
(CT)  
xraylady@outlook.com

### Area Representative, East

Vacant

### Area Representative, Central

Vacant

### Student Representative

Alexa Ritter  
ajritter@mail.fhsu.edu

---

## KSRT COMMITTEE CHAIRS AND APPOINTMENTS

### Bylaws

Brian Ralph, RPA  
bralph@eaglecom.net

### Fellows

Janie Ward, MS Ed, RT(R)(M)  
wardjanie48@gmail.com

### Legislative

Toni Caldwell, BA, RT(R)  
mmcaldwell@aol.com

### Membership

Dawn Williams, RT(R)  
dawnwilliams08@gmail.com

### Media Coordinator

Megan Rucker, Ms.Ed., LRT(R)(M)(CT)  
meganrucker86@gmail.com

### Nominations

Jeff Vaughn, MS, RT(R)  
vaughnjf@yahoo.com  
Kyle Ibarra, RT(R)(MR)  
ibarrakb@gmail.com

### Scholarship

Melinda Chiroy, RT(R)(T)(CT)  
melindachiroy@yahoo.com

### Profess. Development Vice Chair

Susan Dumler, MS, RT(R)(M)(CT)  
(MR)  
suekaycooper@hotmail.com

### Historian

Doug Billings, BA, RT(R),CNMT  
dougbillings1625@gmail.com

### Editor, *The Rotating Anode*

Jen Smith, BSJ, BS, RT(R)(M)(CT)  
jen.smith.rtr@gmail.com

### Executive Secretary

Denise Orth, MS, RT(R)(M)  
ksrt.exsec@gmail.com

### Student Interns

Cody Ray, vice president intern  
Aubrey Stimpert, president-elect intern

**Editor: Jen Smith**  
BSJ, BS, RT(R)(M)(CT)

**Interested in contributing to  
the *Anode*?**

**Contact: Jen Smith**

**Email:**

**jen.smith.rtr@gmail.com**

**(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 MINUTES

10 a.m. Jan. 26, Hutchinson Regional Medical Center

**Members present:** Jen Smith, chair of the board; Toni Caldwell, president; and Brian Ralph, immediate past president. A quorum was present.

**Call to order:** The meeting was called to order at 10:16 a.m.

**Approval of minutes:** Toni Caldwell moved to approve the minutes and Brian Ralph seconded the motion. Motion passed.

**Financial report:** Denise Orth, executive secretary, presented the financial report through Jan. 20. The report showed income of \$19,133.90 and expenses of \$12,311.02. The majority of the income came from a CD worth \$12,121.60 that was cashed in. The net worth report showed a checking account balance of \$12,384.43 and certificates of deposit worth \$42,825.19 for a total net worth of \$55,209.62. Toni Caldwell moved to approve, Brian Ralph seconded to accept the report as presented. Motion passed.

## Old business:

**Affiliate Development Program update:** Toni Caldwell mentioned the financial reimbursement. As of the meeting date, we have not received any financial reimbursement from the ASRT. The ASRT will send out another survey to members. She will call and determine if we need to do anything.

## New business:

None.

**Announcements:** None.

**Adjournment:** Toni Caldwell moved to adjourn. Brian Ralph seconded the motion. Meeting adjourned at 10:25 a.m.

# BOARD OF DIRECTORS MINUTES

10:30 a.m. Jan. 26, Hutchinson Regional Medical Center

**Members in attendance:** Denise Orth, executive secretary; Toni Caldwell, president; Jen Smith, chair of the board/editor of *The Rotating Anode*; Megan Rucker, education chair; Kyle Ibarra, nominations co-chair; Harmony Ibarra, secretary-treasurer; Katilyn Slaton, professional development chair; via phone: Rhonda Sunnenburg, president-elect; Brian Ralph, immediate past president; Melinda Chiroy, ASRT senior delegate.

**Call to order:** The meeting was called to order at 10:41 a.m.

**Quorum:** With eight voting members and two non-voting members, a quorum was established.

**Approval of minutes:** Megan Rucker moved to approve the minutes from the previous board meeting. Jen Smith seconded the motion. Motion passed with a unanimous vote.

**Approval of consent agenda:** Brian Ralph moved to accept the consent agenda. Jen Smith seconded the motion. Motion passed with a unanimous vote.

## Consent agenda:

**President:** Attended meetings, worked on the Affiliate Development Program (procured funds), started procuring items for the silent auction at the annual convention, turned in all required paperwork to the Kansas Hospital Association to become a member, attended the KHA president retreat, started contacting the Capitol for RT Day on the Hill, helped look at locations in Lawrence for the 2020 annual convention, virtual meeting with the student committee, updated a few things on the website and continued to keep Facebook active.

**Legislative:** Continued to monitor legislation, spoke with the legislation liaison at the Capitol concerning an RT Day on the Hill, attended ASRT central region teleconference meeting, officially resigned position on the

Kansas Board of Healing Arts.

**Membership:** Most of the long-time members have now renewed their memberships. However the renewal rate of the recent graduates is still down.

**Scholarship:** Information about KSRT scholarships was emailed to all radiology program directors the first week of December. A reminder e-mail was sent Jan. 10.

**Policy and Procedure Committee:** A compilation of items taken from minutes and previous policies and procedures has been sent out and will need to be discussed at the meeting.

**Chair of the board:** Nothing to report.

**The Rotating Anode editor:** The number of printed copies is remaining steady. Deadline for the next issue will be Feb. 11.

**Secretary-treasurer:** Since the last meeting there have been two special email votes. The first was to decide if the society would have the ASRT keep the physical hard copies of our historical artifacts and just send the KSRT a digital copy or send both the hard copies and the digital copy back. The board voted to just receive the digital copy back. The second vote was for Denise Orth's application as ASRT Senior Delegate. The majority vote was to place her in the position.

## Reports:

**Professional Development:** An email was sent to all of the radiologic technology educational programs regarding the competitions for the annual convention.

**Financial report:** The financial report was explained and discussed. Melinda Chiroy moved to accept the financial report as presented. Jen Smith seconded the motion. Motion passed.

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Continued on Page 4

**Old business:**

**Cleveland Chiropractic:** Toni Caldwell has contacted Cleveland Chiropractic but has not heard back from them. She will reach out to them once again and invite them to the annual conference.

**Affiliate Development Program survey:** Working to put together the survey.

**Kansas Hospital Association:** The KSRT now is affiliated with the KHA. Toni Caldwell and Kyle Ibarra went to the KHA president's retreat. The KHA offers different services as part of the membership, such as legislative assistance. The Heinz Law contract expires in June; therefore the board needs to decide to renew the contract or take advantage of the KHA assistance.

**Convention 2019:** All of the spots for speakers have been filled and the meals have been finalized for the convention. The vendor booths need to be finalized by Feb. 1. March 7 is the cutoff date to book rooms with the Best Western. A discussion was had to give away three one-year KSRT memberships as door prizes at the convention.

**Convention 2020:** The Education Committee is looking at Lawrence for the 2020 annual conference. Potential dates for the conference are March 27-28, 2020, and April 3-4, 2020. Hotels in the area are being researched.

**Emcee:** The board discussed appointing an emcee for the 2019 annual convention to keep the business sessions moving smoothly. Kyle Ibarra was suggested as a candidate. Kyle agreed to accept this responsibility.

**Service project:** Wichita's local hospitals distribute Fresh Start Bags to human trafficking victims. The board decided to collect items to fill these bags as this year's community project at conference. If you

## SPECIAL EMAIL VOTES

### Oct. 21

Denise Orth submitted the KSRT history information to Bill Brennan at ASRT as he is compiling information from each of the affiliates for the museum. The KSRT will be included in the archives. The ASRT would scan and make digital files of all of the information, then either send the society the digital files and all of the items back or they would send the digital files and archive the items. The board of directors put this to a vote. The majority vote was to allow the ASRT to return the digital file to the KSRT and keep the hard copies of the original information.

### Nov. 2

President Toni Caldwell receive one application for the position of ASRT Senior Delegate. The applicant was Denise Orth; she has been an active member of the KSRT for 20 years and held many positions on the board of directors. The board put this application to an email vote. The vote majority vote was yes to name Denise Orth as the ASRT Senior Delegate.

are interested in donating, here are items requested for the bags: duffel bag, sports bras, bikini briefs, dark sweat pants, yoga pants, T-shirts, tank tops, hooded sweatshirts, ankle socks, full-size deodorant, full-size shampoo, full-size conditioner, toothbrush, toothpaste, body wash, body lotion, facial wash, hairbrushes, small packages of pads or tampons, journals, pens, fast food gift cards (\$5-\$10).

### New business:

**Proposed budget:** The proposed budget was discussed. Toni Caldwell will check with the KHA's legislative assistance program and get that information to the BOD to compare with the cost of the contract with Hein Law for lobbying services. An email vote will be held before the annual convention on the proposed budget once that information is received.

**Policies and procedures:** The committee will be adding a list of voting members and a non-discrimination clause and will have it ready by the pre-convention board meeting.

**Board recommendations:** The proposed budget is the only board recommendation for the annual convention.

**Alternate delegates for ASRT:** The board discussed whether to continue to fund sending the alternate delegates to the ASRT House of Delegates meeting. It was decided it is important to continue to budget for their attendance.

**Lapel pins:** The lapel pins for ASRT House of Delegate pin exchange were chosen.

**Conference 2019:** Harmony Ibarra moved to give away three KSRT one-year memberships at the annual convention, two on Friday and one on Saturday. Melinda Chiroy seconded the motion. The motion passed with a unanimous vote.

**Scholarships and membership retention:** Records show that of the previous 13 scholarship recipients, only five still remain members.

### Announcements:

Deadline for *The Rotating Anode* was Feb. 11.

The pre-convention executive committee meeting will be at 1:30 p.m. followed by the full board at 2.

**Fellows committee:** Janie Ward will be stepping down as the chair of the Fellows committee.

**Meeting adjournment:** Jen Smith moved to adjourn the meeting. Megan Rucker seconded the motion. Meeting adjourned at 1:01 p.m.

## 2nd Annual KSRT Community Service Event

The KSRT Board of Directors is excited to announce the 2nd annual KSRT Community Service Event! This event is aimed at helping victims of human trafficking. We are encouraging our members to join the board in donating items that will be given to Ascension Via Christi Human Trafficking group at the Annual Convention, March 29-30 in Wichita. Members who are planning to attend convention can bring their items with them and leave them at the registration table. Members who cannot attend convention but who would like to donate, send your items to:

Megan Rucker 304 E 17th Ave, Hutchinson, KS 67501

Duffel Bag	1 tooth-paste
2 sports bras	1 body wash
1 package bikini briefs	1 body lotion
1 pair dark sweat pants	1 facial wash
1 pair yoga pants	1 hairbrush
1 t-shirt 1 tank top	1 small package pads/ tampons
1 hooded sweatshirt	1 journal
1 package ankle socks	1 pen
1 deodorant	1 \$5-10 fast food gift card
1 shampoo- full size	
1 conditioner- full size	
1 toothbrush	

## ***Convention information***

**Best Western North  
915 East 53rd Street  
Wichita, KS 67219  
(316) 832-9387**

Call the hotel front desk and mention group  
name and arrival date

or

Reserve Online:

[https://www.bestwestern.com/en\\_US/book/hotel-rooms.17107.html?groupId=7H2ZZ6F8](https://www.bestwestern.com/en_US/book/hotel-rooms.17107.html?groupId=7H2ZZ6F8)

\*\* This group reservation link does expire at  
12:00 a.m. the day of the drop date. After that  
the link expires, and you can only call direct.

Rate: \$99.99/night

Drop Date: March 7, 2019



# **Online Registration Available**

Non-Members: To apply for KSRT membership and receive the reduced convention rates, please download the membership application from the KSRT webpage.

[www.ksrad.org](http://www.ksrad.org)

## Registration Form

Registration must be postmarked or submitted online by  
**March 15, 2019** to receive the early bird discount.

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ St: \_\_\_\_\_

Zip: \_\_\_\_\_ Phone: \_\_\_\_\_

Email: \_\_\_\_\_

Select the days/events you  
 plan to attend:

- Fri. (3/29/19) only
- Sat. (3/30/19) Only
- Both Fri. & Sat.
- Fri. evening reception

Select your Status:

- Active, Associate A, or Associate B Member
- Senior or Student Member
- Non-Member (Join the KSRT and save!)

Use table below to determine amount due: \$ \_\_\_\_\_

Early Bird Due March 23, 2018	Fri. Only		Sat. Only		Friday & Saturday	
	Early Bird	Regular Fee	Early Bird	Regular Fee	Early Bird	Regular Fee
Senior/ Student	\$40	\$55	\$40	\$55	\$55	\$85
Other Members	\$80	\$100	\$80	\$100	\$160	\$180
Non- Members	\$160	\$200	\$160	\$200	\$320	\$360

Mail registration and pay-  
 ment to:

Denise K. Orth  
 Executive Secretary KSRT  
 1702 Mermis Court  
 Hays, KS, 67601

- Silent Auction funds the KSRT Scholarships.**

**YES I want to provide an item for the  
 auction! Please bring it to convention  
 and give it to Toni Caldwell.**

# Friday, March 29th

	Event
7:15-7:45	Registration
7:45-8:00	Welcome
8:00-9:00	Jeremy Taylor “ Leadership Development and Radiologic Technologists” <b>T</b> Written Raybowl <b>S</b>
9:00-10:00	Justine Olsen- TBA <b>T</b> Karen McCullough “Interviewing and Negotiations” <b>S</b>
10:00-10:30	Vendor Break
10:30-11:15	Business Meeting #1
11:15-12:15	Audrey Hane “Conquering Self: A Key Competency for Effective Leadership” <b>S/T</b>
12:15-1:00pm	Lunch, Memorial Lecture
1:00-2:00 pm	Jennifer White “Human Trafficking” <b>S/T</b>
2:00-2:15 pm	Vendor Break
2:15-3:15 pm	Diane Greep “Inspection Procedures” <b>T</b> Ruth Bealer “Day One of the Job Forward” <b>S</b>
3:15-4:15 pm	Ryan Harp “The Radiologist Assistant” <b>S/T</b>
4:15-5:30 pm	Raybowl
5:30-end	Business Meeting #2-Awards**, Reception, Silent Auction

\*\*Must be present to collect monetary winnings\*\*

# Saturday, March 30th

7:15-7:45	Registration
8:00-9:00	Gina Everett "Transition from an RT to PA and the Significance of Imaging in a Pediatric Surgical Practice" <b>T/S</b>
9:00-10:00	Mike Veasart- "MRI Safety Before and During the MRI Exam" <b>T/S</b>
10:00-10:15	Break
10:15-12:15	Josh Long "Workplace Violence in Medical Facilities" <b>T/S</b>
12:15-1:00 pm	Lunch
1:00-2:00 pm	Denise Orth "BACK to the Future: Foundation Still Matters" <b>T/S</b>
2:00-3:00 pm	Jeff Berry "TBA" <b>T/S</b>

**S**– student geared lecture (no CE credit on student only lectures; **T**– tech geared lecture (CE); **S/T**– student and tech geared (CE)

**\*Room temperature is out of our control!** We suggest wearing multiple layers to ensure your personal comfort level. \*Schedule, speakers, and topics are subject to change. \*Category A approval pending for 12 CE's. *Student specific presentations are not for CE credit\** Attendees must be present for the entire presentation to receive continuing education credit.

# OBSTETRIC ULTRASONOGRAPHY

By Zairilys Herrera, Washburn University

Third-place essay

## Abstract

Ultrasonography is a noninvasive imaging modality that uses sound waves to enter the body; as these sound waves hit organs and other structures in the human body, echoes bounce back. These echoes form an image, known as a sonogram. The images obtained through ultrasonography reflect a variety of tissues and can lead to a diagnosis or are used for screening purposes because of how fast it can be performed and the lack of radiation to patients. Ultrasonography is used to visualize any organ of the abdomen, small parts such as the thyroid or scrotum, vasculature, and the arterial system. It also is used routinely in obstetrics to assess a developing fetus and in gynecology to evaluate and diagnose any tumors or cysts in the female reproductive system. In recent years, the image quality of ultrasonography has improved drastically because of the equipment used. It has been the preferred imaging modality in obstetrics, is able to provide early detection of certain abnormalities, and is considered accurate in tracking the growth and gestational age of a fetus. This paper will discuss a brief history of ultrasonography and in specific, how it is currently being used in obstetrics: the branch of medicine that deals with the care of women during pregnancy, childbirth, and the recuperative period following delivery (The Free Dictionary, n.d.).

## Review of Literature and Discussion:

Ultrasonography first was used as a therapy treatment. It was believed to help several conditions such as arthritis; however, none of the treatment plans had any scientific evidence behind them. Over time, its purpose then changed to diagnostic evaluation. It began to be used for brains; however, it was quickly noted this modality was not the proper one to use because it was extremely difficult to distinguish anatomical structures on the sonograms and it led to false positives. Pioneers began realizing ultrasonography was best used for soft tissue and therefore began developing breast exams. Ultrasonography distinguished between the normal breast tissue and any nodules that were present. Because of how quickly and non-invasive ultrasonography was becoming with the advancements in equipment, physicians began expanding the use of ultrasonography into the field of obstetrics and gynecology. It began in Glasgow, Scotland, with Ian Donald.

In 1959, Donald realized that fetal head echoes could be obtained and began using this method to assess the size of the fetus and its development. After this, fetal cephalometry, measure of the cranium, became the standard method for the evaluation of fetal growth. During

the following years, ultrasonography began to be used to track the pregnancy from beginning to end. This use increased drastically beginning in 1966. It is the method of confirming a pregnancy, multiple pregnancies and any fetal abnormalities. Other important individuals who began researching ultrasonography and pregnancy were Tom Duggan and James Willcoks. They performed several exams and wrote papers on their findings. Manfred Hansmann and John Hobbins were among the primary pioneers who researched ultrasonography and diagnosis of fetal malformations. Because of these individuals and their work, diagnostic medical sonographer was recognized as a profession in 1974 by the American Medical Association (Woo, 2001).

Fetal malformations that can be diagnosed via ultrasound include anencephaly, hydrocephaly, exomphalos, duodenal atresia, polycystic kidneys, hydrops fetalis and limb dysplasias (Woo, 2001). Again, high-quality machines and equipment are able to bring higher resolution scans that visualize more anatomical structures for more accurate diagnoses. The transvaginal method, when the transducer is inserted into the vagina, also has improved the ability to catch abnormalities in the first trimester, when the fetus is much smaller with smaller features.

Transvaginal became widely accepted in the mid-1980s when the equipment and image quality had improved dramatically. Another form of technology that has impacted the field is color Doppler; this has assisted in identifying cardiac malformations. Color Dopplers are able to visualize and track blood flow. In fact, the accuracy of catching any cardiac malformations can be as high as 95 percent using sonography with color Doppler (Woo, 2001).

Another important reason behind using ultrasonography in obstetrics is to track fetal measurements. There is usually a scan in the beginning of pregnancy to confirm the pregnancy by obtaining images of the gestational sac, along with confirmation of multiple pregnancies and location of the placenta. Another scan is routinely performed at 20 weeks, which became the norm in the early 1990s. This is typically performed to look for any malformations and continue tracking the growth. This scan is most popular as the gender reveal; however, it brings much more information than just the sex of the fetus. There are multiple fetal measurements that can be performed to track fetal growth. These are the crown-rump length (CRL), biparietal diameter (BPD), femur length (FL), head circumference (HC), ciptofrontal diameter (CFD), abdominal circumference (AC), and humerus length (HL), as well as calculations to determine the estimated fetal weight (EFW) (Fetal and Obstetric Ultra-

sound Measurements in Pregnancy, n.d.). During routine scans, sonographers must be able to visualize certain anatomy such as: skull shape, intracranial anatomy, spine, four chambers of heart, thorax, diaphragm, stomach bubble, kidneys, bladder, and all four limbs (Chity, Hunt, Moore, & Lobb). If any part is not visualized, it could lead to further testing or the diagnosis of a malformation. Parents then are counseled and explained their options, which can include adoption, treatment or termination. Malformations occur in 2-3 percent of all infants and account for about a quarter of all perinatal deaths (Chity, Hunt, Moore, & Lobb). Perinatal mortality decreases when women receive routine sonograms because major malformations are detected. Fetuses are able to receive the proper treatment as soon as birth and physicians are able to prepare for any possible complications.

A common condition which provides "soft markers" through ultrasonography is Down syndrome. This is determined by the sonographer evaluating and measuring the thickness of the nuchal translucency, the fluid buildup behind the fetus's neck, femur length, and findings of any choroid plexus cysts. These are considered "soft markers" because their findings cause further testing which can lead to the actual diagnosis of Down syndrome. Although ultrasonography cannot completely diagnose this syndrome, it is able to show any signs, and then prompt testing can give a diagnosis before birth. Cleft lip however, is a condition that can be visualized on ultrasonography easily with both 2D and 3D ultrasonography. False positives can happen with this condition, but the percentage is low.

Although ultrasonography successfully has diagnosed malformations and abnormalities, there are things that could interfere with the scan. These can include maternal obesity, multiple pregnancy, fetal position and late booking for prenatal care. Maternal obesity can affect the display of the sonograms, making it difficult to distinguish any malformations that may be present. Multiple pregnancy and fetal positions are also things which can interfere and somewhat can be avoided with an experienced sonographer who can work around the fetuses and detect the anatomy. Any of these factors could lead to a false positive diagnosis, which can result in the loss of a normal infant (Chity, Hunt, Moore, & Lobb). It is critical to perform routine scans to receive the proper care and treatment once a fetus is diagnosed with a malformation or abnormality. Special management can be arranged for the fetus for right after birth as necessary. Parents also are able to receive counseling and prepare for the arrival of their child that may have a condition which needs special care. Studies show that parents normally experience some anxiety for these scans and some may have emotional suffering because of a positive result or false positive; however, overall parents generally are calm once they learn their child is normal and healthy. It also

has been valuable emotionally to parents to know of any malformations or conditions before the fetus is born.

### Summary

Ultrasonography is a powerful diagnostic tool especially in the field of obstetrics. It has changed drastically since it first began because of the work of many individuals. Overall, it is used in order to track fetal development and also has the capability of diagnosing or finding signs of certain malformations and abnormalities. This is a great benefit for physicians and parents who are able to make a treatment plan during the pregnancy or after the fetus is born in order to prevent any complications or fetal demise.

### Works cited:

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APPLICATION FOR MEMBERSHIP

THE KANSAS SOCIETY OF RADIOLOGIC TECHNOLOGISTS

By submitting this form, you are agreeing to abide by the Bylaws of the Kansas Society of Radiologic Technologists. You are also acknowledging the information submitted is correct and accurate. Dues must accompany this application.

FULL NAME \_\_\_\_\_
First Middle Initial Last Credentials

Street City State Zip

DOB \_\_\_\_\_ Email \_\_\_\_\_
Month Day Year

Phone Number ( ) \_\_\_\_\_ Date of application \_\_\_\_\_

Check membership category.

ACTIVE MEMBER: DUES \$50.00/Year
Certified by ARRT and Member of ASRT and practicing in the field of radiologic technology.
MUST SUBMIT COPIES OF ARRT AND ASRT CARDS

ASSOCIATE A MEMBER: DUES \$50.00/Year
Certified by ARRT and practicing in the field of radiologic technology.
COPY OF ARRT CARD MUST BE SUBMITTED.

ASSOCIATE B MEMBER: DUES \$50.00/Year
Persons practicing in the field of radiologic technology not certified by the American Registry of Radiologic Technologists and are not registry eligible; or, those persons interested in promoting the purposes and functions of the KSRT, but are not eligible for Active, Associate A, Life, Senior or Student membership.

SENIOR MEMBER: DUES \$25.00/Year
Certified by ARRT and 65 years old or more.
SEND COPIES OF ARRT CARD AND BIRTH CERTIFICATE OR DRIVER'S LICENSE.

STUDENT MEMBER: (STATUS APPLIES TO PRIMARY PROGRAM OF STUDY) DUES \$25.00/Year
Enrolled in an approved school of radiography for a MINIMUM of 24 months.

PRESENT EMPLOYMENT or SCHOOL: \_\_\_\_\_

STUDENTS ONLY: Date of Enrollment \_\_\_\_\_ Anticipated Date of Graduation \_\_\_\_\_

Continuous Renewal \_\_\_\_\_ New applicant \_\_\_\_\_ (PLEASE CHECK ONE)

\*\*\*Graduate Bridge Program: Certificate must be returned with membership renewal application and dues stated on certificate. Valid for primary program of study.\*\*\*

The KSRT values our volunteers! Which of the following would you be interested in volunteering for?

Circle all that apply: Committee Officer Speaker

"The Rotating Anode" is available electronically for all new members.

I would like to contribute to the Scholarship Fund for the amount of \$ \_\_\_\_\_ in addition to my dues. This DOES NOT qualify as a charitable deduction OR professional expense for tax purposes.

PLEASE RETURN TO:

Denise K. Orth Executive Secretary, KSRT 1702 Mermis Court Hays, KS 67601 KSRT.exsec@gmail.com
Pay with PayPal or make checks/money orders payable to the KSRT. No partial dues accepted.
\$25.00 CHARGE FOR ALL CHECKS RETURNED FOR INSUFFICIENT FUNDS!



**ADDRESS SERVICE REQUESTED**

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