



# Dakota Diagnostic

Volume 5 | July 2022 | North Dakota Society of Radiologic Technologists Newsletter

## *Announcement*

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Join us for our BONUS virtual conference this fall! If you came to the 2022 NDSRT April conference, these credits are FREE to you! If you did not join us for the conference, buy a membership for \$45 and receive 2 FREE CE credits! This conference will launch at the start of Rad Tech week on November 7th in an On-Demand style.

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## *Inside This Issue*

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PG. 2

Radiology Highlight: Magnetic resonance imaging (MRI)

PG. 3

Virtual Reality in Radiology

PG. 4

Radiology Assistants: What do they do?

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## Radiology Highlight: **MRI**

Magnetic resonance imaging (MRI) uses a magnetic field along with computer-generated radio waves to create detailed images of the organs and tissues in your body. The magnetic field will actually realign the water molecules in your body. The radio waves will cause the aligned atoms to produce faint signals which are then used to create cross-sectional MRI images, similar to slices in a loaf of bread. This noninvasive way of imaging is highly detailed and used for many parts of the body. MRI is an amazing modality that might just be the right fit for you!

[https://www.mayoclinic.org/tests-procedures/mri/about/pac-20384768#:~:text=Magnetic%20resonance%20imaging%20\(MRI\)%20is,large%2C%20tube%2Dshaped%20magnets.](https://www.mayoclinic.org/tests-procedures/mri/about/pac-20384768#:~:text=Magnetic%20resonance%20imaging%20(MRI)%20is,large%2C%20tube%2Dshaped%20magnets.)



<https://4rai.com/blog/why-the-3-tesla-mri-is-the-best-scanner-for-diagnostic-imaging>

“I’m going to get an MRI to find out whether I have claustrophobia”

-Steven Wright

## Interview with MRI Tech Shaylyn Martin

Shaylyn has been an MRI tech for the last 5 years and is currently working at Sanford Health in Bismarck. She became interested in this modality because she found the science behind acquiring high detail images intriguing.

“My favorite part about being an MRI tech is constantly learning about new devices & different diagnoses & what I can do with that information to contribute to a patient’s imaging,” Shaylyn explained.

Her advice for someone wanting to work in MRI is to become familiarized with cross-sectional anatomy and always be willing to learn new things.

“MRI is relatively young in comparison to some other modalities which means things are constantly changing and advancing,” Shaylyn says.

## What can you MRI?

MRI is used for so many different body parts including:

- Brain & spinal cord
- Heart & blood vessels
- Liver & bile ducts
- Kidneys
- Spleen
- Pancreas
- Uterus
- Ovaries
- Prostate
- Bones & joints
- Breasts



# Virtual Reality in Radiology

The medical field is constantly changing and innovating, so there is no surprise that virtual and augmented reality is the next up-and-coming thing in our world. Virtual reality is proving to be specifically helpful for radiology students, residents and radiologists. This technology allows students and residents to practice hypothetical scenarios by entering them into a virtual radiology suite where they can pick their equipment for the procedure and actually perform. Being familiar with the equipment and tools prior to performing on actual patients can tremendously ease students' minds and allows them to practice without consequence.

Radiologists may use virtual or augmented reality to examine images from practically any location and without distraction. Surgeons may also use this technology for pre-procedural planning to determine the best possible decisions to make during the operation. Virtual reality applications can help ease patients' anxiety by actually allowing them to run through their procedure beforehand and show them what to expect.



## Downfalls

Just like with any other technology, virtual reality also has its limitations. Ergonomically, this technology isn't the most user-friendly. Prolonged usage of the head-mounted displays can cause neck discomfort, nausea, and vertigo. Virtual reality also has relatively high prices, especially in the education domain. Not only does the headpiece cost money, but the educational programs do as well.

## Conclusion

Virtual and augmented reality is becoming more and more popular and can be extremely helpful in the medical field. Keeping up with the ever-changing innovations is part of this field and imperative to progress. You may be seeing virtual reality coming to your facility soon!

<https://www.medical-professionals.com/en/virtual-augmented-reality-medical-imaging/#:~:text=Radiologists%20may%20examine%20virtual%20reality,patient%27s%20operation%20is%20carried%20out.>



Virtual and Augmented Reality  
in Medical Imaging





# Radiology Assistant

If you have ever considered going back to school for radiology assistant or just curious about this career, then this is the article for you. A radiology assistant (RA) is typically a Master's degree and is considered an advanced practice radiologic technologist. RAs enhance patient care by assisting the radiologist with patient assessment, patient management, and radiologic procedures. They can also make initial observations of diagnostic images but do not provide the official interpretation.

We interviewed Radiology Assistant, Carla Barrios, employed by Bismarck Radiologist Associates, to get more insight on this career. Carla had been in Radiology for a long time and was constantly striving to advance her knowledge and skills. "I have worked in many radiology modalities over the years. I came to a crossroads after working in the management side of Radiology for about a decade and realized how much I missed patient care." Carla did a lot of research and found that RA was a perfect fit for her next Radiology endeavor.

"Radiologic Technologists have such a vast knowledge in many areas of patient care and expertise in medical imaging, and progressing to an advanced radiologist practitioner role is really important to providing quality patient care in the demanding, changing health care environment." She firmly believes that there is value added because of roles such as advanced practitioners in the medical field, and that Radiology is an unofficial separate medical entity in itself. "Radiologic science educated and trained professionals are the perfect background to have for a Radiology advanced practitioner to assist the radiologist in a Radiology department. After a lot of research, I applied and was accepted to the Weber State RA program, the original and first program for RAs that was developed with the Department of Defense," Carla says. She also states that there are pre-requisites to the programs, so doing your research is imperative as well as securing preceptorship from a facility and radiologists.

You may be asking yourself: What do the day-to-day duties of an RA look like? We asked Carla to find out: "Every RA in the country has their own unique day-to-day duties and responsibilities. That really is the beauty of being one. We all know how varied the modalities of Radiology are and the differences in examinations and procedures they all bring to the table. That is what will be the determining factors of a RA's day. Fluoroscopy examinations are definitely a priority in the RA programs and in most RA's days. Contrast joint injections are also a very common duty with most departments. RA's can perform a lot of varied procedures in IR departments. Radiologists determine where an RA can best help them in the department to free up the time of radiologists to do the more advanced procedures and interpretation of all imaging. This especially gives them time for advanced medical imaging interpretation. Scope of practice standards of state and regulating bodies will affect what an RA can do."

Carla says that she loves being in patient care, and she believes RAs can bring so much to the patient's experience and care. "We all recognize how much demand is on our time to devote to quality patient care. Especially in rural states like ND. Freeing up time for radiologists helps them devote more time to quality interpretation of all the medical imaging and to perform advanced, complicated procedures."

If you are considering going into this career, Carla suggests doing very thorough research. Becoming an RA is significantly different than learning and working in a new modality. She says that it is a whole, advanced level of patient care within Radiology. However, it is worth the time and effort and is extremely rewarding!



<https://www.healthimaging.com/topics/medical-imaging/interventional-radiology/ir-departments-felt-impact-covid>



# **BONUS** Virtual Conference this Fall!

*What:* Virtual Conference

*When:* Start of Rad Tech week (11/7)

*Where:* Virtually, On-demand style

*Why:* Earn CE credits & Learn

## 2023 NDSRT Annual Conference Details

April 22<sup>nd</sup>, 2023 at the Delta Hotel in Fargo,  
ND! Earn CE credits, network, & enjoy great  
speeches & booths

*Mark Your  
Calendar!*



# ASRT

## STUDENT TO LEADERSHIP AND DEVELOPMENT PROGRAM

### *took a trip to Orlando*

Hannah Fischer and Karra Hanson were selected by NDSRT to attend educational sessions and the ASRT House of Delegates Meeting in sunny Orlando, Florida. They had a busy first day that included a meet and greet with the speaker, vice speaker, president, and other ASRT board members.

The next day, Hannah and Karra went to different classes such as the educational symposium and expo. That evening they also had a pin exchange in which they met students from all of the United States. The following day consisted of the House of Delegates

Meeting and an honors evening where two individuals became fellows and one became an ASRT life member. On the fourth day, Hannah and Karra went to different chapter meetings throughout the day and also attended the retirement lunch of CEO Sal Martino. That evening they even ventured out to Disney Springs! The last day involved another House of Delegates meeting and the installation of officers and presidents where newly elected board members took their oaths.

“I think my favorite part was seeing really how far you can go in your career and really how much of a difference you can make in the radiography field,” Hannah informed us, “I learned how important it is to be a part of different organizations in your field and be an advocate for yourself, your coworkers, and profession. This was beneficial in so many ways. I think the biggest benefit to me was learning how to advocate for our profession and take part in different volunteer opportunities to keep improving our profession.”



Karra says, “My favorite part was the student pin exchange. I got to meet lots of students from different states and it was cool to see all the creative state pins. It was amazing to see how passionate everyone was there and their love for radiology. I learned more about how the ASRT works and how important it is to be involved in your state’s affiliate. I also learned about some of the different positions you can be in your individual state and the positions on the board of the ASRT. I believe this will benefit me in the future because it has taught me that it is important to be involved in your state and to be able to help make positive changes in our field of radiology. It makes me very excited for my profession that I am going into and makes me motivated to be involved.”





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