

Thriving in an Environment of Accelerating Change: A Technologist's Survival Guide

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Objectives

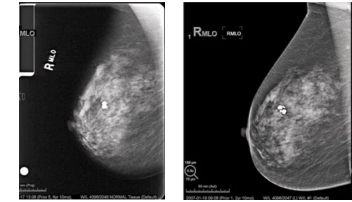
- Understand how breast imaging technologies and tools have changed over the last several years bringing challenges, opportunities, and growth to breast imaging teams
- Discover methods for minimizing burnout and stress from a physically and emotionally demanding environment
- Identify steps in the "Guide to Thrive" toolkit to overcome challenges and embrace opportunities in an environment of accelerating change



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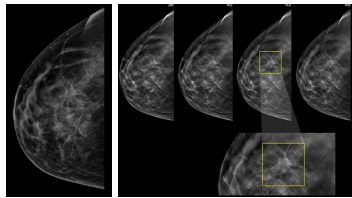
Technology is Everchanging



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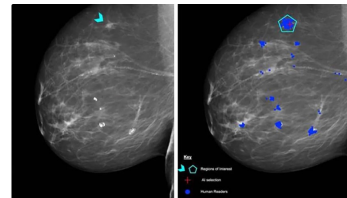
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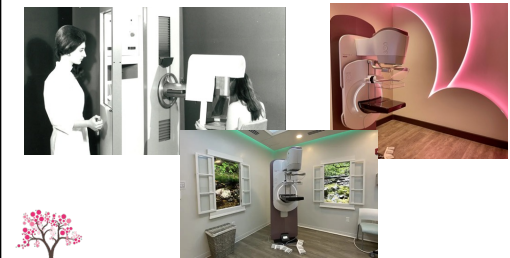
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Technology is Everchanging



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Technology is Everchanging

- Remote Reading
- Artificial Intelligence (AI)
- New Imaging Technologies
- New Technology in Electronic System



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Technology is Everchanging

- **Remote Reading**
- Artificial Intelligence (AI)
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Personnel Shortages Lead to Remote Reading

- Current shortage of dedicated breast radiologists in almost every state in America
- In addition to the breast radiologist shortage, there are currently over 4,500 job postings for mammography technologists in the US
- The shortage has led to increased burnout and decreased job satisfaction over the last several years




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Personnel Shortages Lead to Remote Reading

- Telemammography services
- Offsite radiologists (reading from home or another setting)
- Hybrid reading services



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Telemammography

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Benefits of Telemammography

- Increases access to breast radiologist expertise
- Improving outcomes in breast cancer diagnosis
- Provides timely interpretation and treatment for patients
- Accomplished without negatively impacting workflow




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Benefits of Telemammography



Potential Increase
in Job Satisfaction




Potential Decrease
in Burnout



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Challenges of Telemammography



- Cost of implementation
- Liability risks
- Radiologist resistance
- Loss of the team approach to breast imaging



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Challenges of Telemammography

- Lack of face-to-face interaction
- Lack of verbal interaction when using messaging platforms
- Studies show less rapport and connection due to isolation

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Technology is Everchanging

- Remote Reading
- **Artificial Intelligence (AI)**
- New Imaging Technologies
- New Technology in Electronic System



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AI is not...

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Benefits of Artificial Intelligence

- Cancer detection
- Compression
- Density
- Quality imaging
- Assist in EQUIP and accreditation processes



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Artificial Intelligence Challenges

- Learning curve
- Can be viewed as punitive
- Interpreting the data
- Disagreement with results (density, positioning)



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Technology is Everchanging

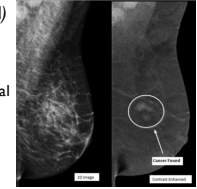
- Remote Reading
- Artificial Intelligence (AI)
- **New Imaging Technologies**
- New Technology in Electronic System



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New Imaging Technologies

- *Contrast Enhanced Mammography (CEM)*
- Includes a normal mammographic image
- Bilateral study with single CC and MLO images of each breast using dual energy
- Each breast is imaged at a different time point with high and low kVp



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New Imaging Technologies

Elastography

- Non-invasive
- Mechanical force introduced to breast tissue
- Measure the displacement of tissue
- Estimate stiffness of tissue

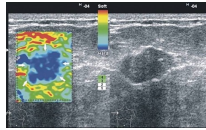


Image courtesy Applied Radiology

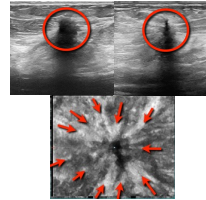


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New Imaging Technologies

3D Ultrasound

- Shows spiculations better than traditional US
- Show DCIS components and intraductal components
- Assesses complex cysts
- Identifying anatomy



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New Imaging Technologies

Breast CT

Computed Tomography of the breast



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Technology is Everchanging

- Remote Reading
- Artificial Intelligence (AI)
- New Imaging Technologies
- **New Technology in Electronic Systems**



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New Technology in Electronic Systems

- EMR updates
 - Letters populating MQSA final rules
- Electronic QC tracking
- Electronic EQUIP reviews



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We Work in Technology-driven Environments

- Efficient
- Productive
- Functional
- Informative
- Profitable




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Change Can be Stressful




- Learning something new can be overwhelming
- Stress and feelings of overwhelm can lead to burnout and even contribute to workforce shortages



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Burnout Can Lead to Staffing Shortages

- Post-COVID catch-up
- Extreme schedules
- Limited staff
- Physical and emotional demands



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How Will You Manage?




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Guide to Thrive

Step 1: Focus on Ergonomics

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Focus on Ergonomics



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Focus on Ergonomics






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Focus on Ergonomics



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Focus on Ergonomics

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Focus on Ergonomics





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Guide to Thrive

Step 2: Maintaining Connections

- Improved health and wellbeing
- Greater productivity
- Higher job performance
- Increased job satisfaction
- Greater work participation and increased social inclusion
- Increased individual, team and organizational resilience
- Lower absenteeism rates
- Less workplace injury and workers' compensation claims




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Maintaining Connections

- Identify your communication strengths and weaknesses
- Practice mindful listening
- Keep a positive mindset
- Skip the gossip
- Encourage workplace collaboration
- Be complimentary


Stay positive



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Maintaining Connections

- Focus on implementing systems of offering effective feedback
- Sociability




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Guide to Thrive

Step 3: Give Feedback


- ACR Task Force on Teleradiology Practice states communication is critical to ensure overall quality and safety
- Relationships between radiologist and technologist based on trust
- Minimize communication barriers
- Critical to diagnostic breast imaging
- Communication must be timely



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Give Feedback

- Failure to have a communication system may result in adverse events (i.e. failure to diagnose a condition or unnecessary radiation exposure)
- Principal 6 of the ARRT Code of Ethics: "The radiologic technologist acts as an agent through observation and communication to obtain pertinent information for the physician to aid in the diagnosis and treatment of the patient."




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Give Feedback

Feedback is an essential aspect of the MQSA's Enhancing Quality Using the Inspection Program (EQUIP):


- Feedback helps technologists feel empowered and trusted to willingly offer their opinions or comments to improve systems and processes
- Feedback can be provided in the form of appreciation or individual coaching



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Give Feedback

- Appreciation – desire more of a specific behavior
- Coaching – intent of wanting to change a specific behavior
- Employee Rounding – to measure the engagement, satisfaction, and strength of imaging teams
- Use e-messaging options, onsite resources, or other personnel to assist




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Guide to Thrive

Step 4: Focus on Sociability

"The relative tendency or disposition to be sociable or associate with one's fellows."
- Dictionary Definition


"The degree to which people have ... a sense of belonging and being cared for, valued, and supported."
- CDC Definition



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Focus on Sociability

- Radiologists may work from home or from "off-site" locations
- Radiologists often work in isolation
- Technologists may be confined to exam room, limiting interaction with others



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Focus on Sociability

Lack of communication often results in:

- Likelihood of technologists refraining from asking questions or suggesting improvements
- Increase in radiation exposure to patients with unnecessary repeated images
- Technologists may be less likely to provide information and adequate patient history to IP



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Why is Sociability So Important

Positive working relationships:

- Improves job performance
- Contributes to a sense of belonging
- Contributes to a feeling of involvement
- Leads to higher quality care for patients.



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Tips for Creating a Higher Level of Sociability

Offer digital photo and biography introductions of radiologists and technologists:

- Promotes recognition and identification
- Include general personal information such as hobbies and special interests



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Tips for Creating a Higher Level of Sociability



Video Credit: Interior Health
British Columbia



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Tips for Creating a Higher Level of Sociability

- Team educational activities such as virtual lunch and learns
- Pick up the phone ... don't just text
- Protocols are necessary when digitally communicating
- Ensure continuous open lines of communication



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Tips for Creating a Higher Level of Sociability

Efforts should be placed on maintaining relationships and connections with technologists in different locations. A voice on the other end of a phone call relays a smile, enthusiasm, authenticity, and generosity. The sound of a person's voice can brighten someone's day and turn a daily challenge into favorable optimism.



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Guide to Thrive Toolkit for Mammographers



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Change Brings Chance



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“We either make ourselves miserable or we make ourselves happy. The amount of work is the same.”

-Carlos Castaneda



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References

Three ways remote breast radiologists help improve your practice. DocPanel. June 9, 2022. Accessed December 4, 2023. <https://www.docpanel.com/three-ways-remote-breast-radiologists-help-improve-your-practice/>

Shu E, Jia B, Breslau J, Ben P, et al. ACR white paper on tele radiology practices: a report from the Task Force on Tele radiology Practice. *J Am Coll Radiol*. 2013;10(8):575-585. doi:10.1016/j.jacr.2013.03.008

Quang H, Parikh J. Tele mammography technical advances improve patient access in breast care. *J Breast Imaging*. 2020;2(2):152-156. doi:10.1093/jbi/abaa088

Quarshay M, Ross AA. Health RE: Off-site radiology workflow changes due to the coronavirus disease 2019 (COVID-19) pandemic. *J Am Coll Radiol*. 2020;17(7):878-881. doi:10.1016/j.jacr.2020.05.008

How does social connectedness affect health? Centers for Disease Control and Prevention. Accessed December 4, 2023. <https://www.cdc.gov/emotional-wellbeing/social-connectedness/affect-health.htm>

Holt-Lunsted J, Shapiro A. Social isolation: an underappreciated determinant of physical health. *Curr Opin Psychol*. 2022;49:232-237. doi:10.1016/j.copsyc.2021.07.012

"Sociability." *Vocabulary.com Dictionary*. <https://www.vocabulary.com/dictionary/sociability>. Accessed 13 Feb. 2024.

Videos: Vidpara Health, Interior Health



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