

# Cath Lab Digest

A product, news & clinical update for the cardiac catheterization laboratory specialist



## ANOMALIES

### Rare Variant of the Obtuse Marginal Artery Originating From the Left Anterior Descending Coronary Artery

Seyed Khalafi, MS; Mehdi Khalafi, MD; Giri D. Mundluru, MD

#### Abstract

Coronary artery anomalies are a rare phenomena in cardiology. CAA is infrequently reported as most are indolent and found incidentally on cardiac imaging. We report the case of a 76-year-old male with a history of hypertension, peripheral arterial disease, myocardial infarction 2 years prior, and hyperlipidemia, presenting with dyspnea on exertion. The patient had an abnormal stress test and underwent a left and right coronary artery catheterization that showed a mid-LAD stenosis of 80% and a chronic total occlusion of the RCA. On angiography, the patient had a left obtuse marginal artery originating from the LAD.

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## In This Issue

### Is Your Lab Using Intravascular Imaging Enough?

Morton J. Kern, MD

The scientific literature is packed with data on why intravascular imaging should be routine for PCI, both before and after stent placement. However, the discordance between the evidence and guidelines with the actual use of imaging across the country and around the world demonstrates that not all operators practice PCI with imaging. Why do some operators avoid using imaging for routine practice? I thought I'd look again at this question, as it has been asked for decades since the introduction of imaging (the same can be said about physiology).

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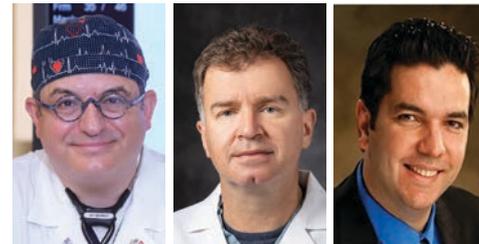
## PROGRAM SPOTLIGHT

### Interventional Cardio-Oncology at The University of Texas MD Anderson Cancer Center

Cath Lab Digest talks with:

- Mehmet Çilingiroğlu, MD, FSCAI, FACC, FESC, FAHA
- Cezar A. Iliescu, MD, FACC, FSCAI
- Konstantinos Marmagkiolis, MD, MBA, FACC, FSCAI

The Department of Cardiology at MD Anderson and its team was the first in the world to provide comprehensive cardiac care to patients with cancer, focusing on the prevention, diagnosis, and treatment of cancer therapy-induced cardiotoxicity.



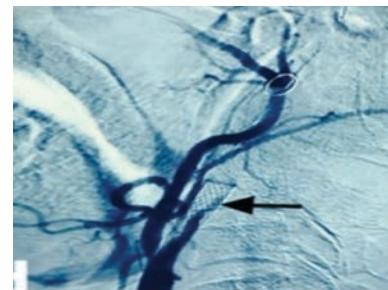
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## CATH LAB MANAGEMENT

### Strategies for Training Healthcare Professionals in the Post-COVID Era

Samantha Propper, MBA, BS, RCIS

The COVID-19 pandemic has exposed many of the longstanding challenges in the healthcare industry, including staffing shortages and the need for ongoing training and education for healthcare professionals. In the cath lab, understaffing can lead to a lack of education and knowledge, as staff are often in survival mode, just trying to make it through cases. Even as the pandemic begins to subside, healthcare facilities are still struggling to train staff members who may have only 2-3 years of experience or less.



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# Strategies for Training Healthcare Professionals in the Post-COVID Era

Samantha Propper, MBA, BS, RCIS

To address these challenges, I developed educational resources to provide support and guidance to healthcare professionals seeking to expand their knowledge and skills in the cath lab. By empowering our staff with the confidence that comes from knowledge and hands-on experience, we can ensure that our hospitals are well-prepared to meet the demands of a rapidly evolving healthcare landscape.

Through my experience working with healthcare professionals in various cath labs, I have learned that the lack of education and training is not isolated to a single facility or region. In fact, it is an issue that affects cath labs across the country. Some facilities are so busy that they do not have the time to properly train staff or address questions and concerns. Others may lack experienced personnel to share knowledge with less experienced staff members. This is where external resources can be particularly valuable, as they can provide a flexible and personalized way to address knowledge gaps and empower healthcare professionals with the tools they need to succeed in their roles.

The purpose of this article is to help healthcare

## Providing opportunities for personal and professional development can improve morale and retention rates.

professionals identify practical solutions that they can implement within their own departments to address staffing challenges, support ongoing education and training, and ensure that patients receive the highest quality of care possible. It is important to consider where you can leverage resources within your community and beyond to help support these efforts.

### Streamline Training With Online Modules, Social Media, and Webinars

Online training modules, webinars, and livestreaming cases can offer efficient and cost-effective ways to provide training to healthcare professionals working longer hours or on nontraditional schedules. Livestreaming cases online can provide a highly effective way to give staff experience in real time. Social media channels, including Instagram, TikTok, and Facebook, can also raise awareness about cardiac cath labs, structural heart procedures, and emerging trends.

In addition to my own experience working with healthcare professionals in the United States, I have also had the opportunity to connect with individuals from around the world, including India, Australia, and

Germany, who are facing similar challenges in their own healthcare systems. While the structures and resources may differ, the desire to feel empowered and capable in one's role is universal. In the face of unprecedented challenges, including the impact of COVID-19 on patient outcomes, it is more important than ever to build a global community of healthcare professionals who can share their experiences and support one another. Through digital training platforms and social media, I have seen firsthand the power of these connections, with hundreds of individuals interacting and sharing their knowledge and expertise, regardless of time zone or location.

Social media platforms, including my own Instagram and TikTok account @dontmissabeat.ig (Video 1) and other Instagram accounts such as @icunursingnotesbycaitlyn, can be powerful tools to raise awareness about the cardiac cath lab, share knowledge and expertise, and connect with healthcare professionals around the world. By sharing educational content, livestreaming cases, and emerging trends in the field, these accounts are providing a valuable resource for both new and experienced professionals. These platforms offer a great opportunity to build a community and share experiences. I was shocked the first time I saw over 500 people interacting with story quizzes at home, on weekends or at 2 am after being called in for a ST-elevation myocardial infarction (STEMI) outside of working hours (Video 2). Another advantage of these resources is that they are readily accessible and come at no cost to the department, making them an ideal tool for sharing with both novice and experienced personnel. However, it is important that these resources first be vetted by knowledgeable personnel.

### Partner With Local Cardiovascular Technology Schools to Leverage Resources

Partnering with local cardiovascular technology schools is a mutually beneficial approach that can help healthcare facilities and schools develop a stronger relationship. Inviting educators from these schools to the hospital to provide hands-on training or give lectures can provide valuable insights and techniques to staff. Additionally, this can help create ongoing collaborations and future recruitment opportunities.

Another way to leverage resources in cardiovascular technology programs is through mentorship opportunities with students. This approach can provide valuable hands-on training for students and allow experienced staff to reinforce their skills by teaching and mentoring. Hospitals can choose to financially support staff who volunteer their time to mentor students, or staff may choose to do so on a

voluntary basis. This approach not only provides a low-stakes environment for students to practice and solidify their skills but also brings in highly skilled new graduates who can contribute to the department and have a shorter orientation. By investing in mentorship programs, healthcare facilities can foster a culture of learning and growth while building strong relationships with local educational institutions.

Figure 1 depicts a structure that can help plan resources for labs experiencing understaffing and a shortage of experienced personnel with preceptorship experience. This structure is particularly useful for labs where the most experienced staff member has less than 3 years of experience and is responsible for training all new staff. This can be a challenging situation, as the staff member may become overwhelmed and exhausted, resulting in suboptimal training outcomes. By implementing the structure outlined in Figure 1, and partnering with a local college, lab managers can improve their training processes and provide the necessary guidance and support to all staff. (If a cardiovascular technology program does not exist in your geographic area, keep reading for further suggestions that may prove useful.) Additionally, this approach can facilitate the recruitment of new graduates to help build the lab's capacity.

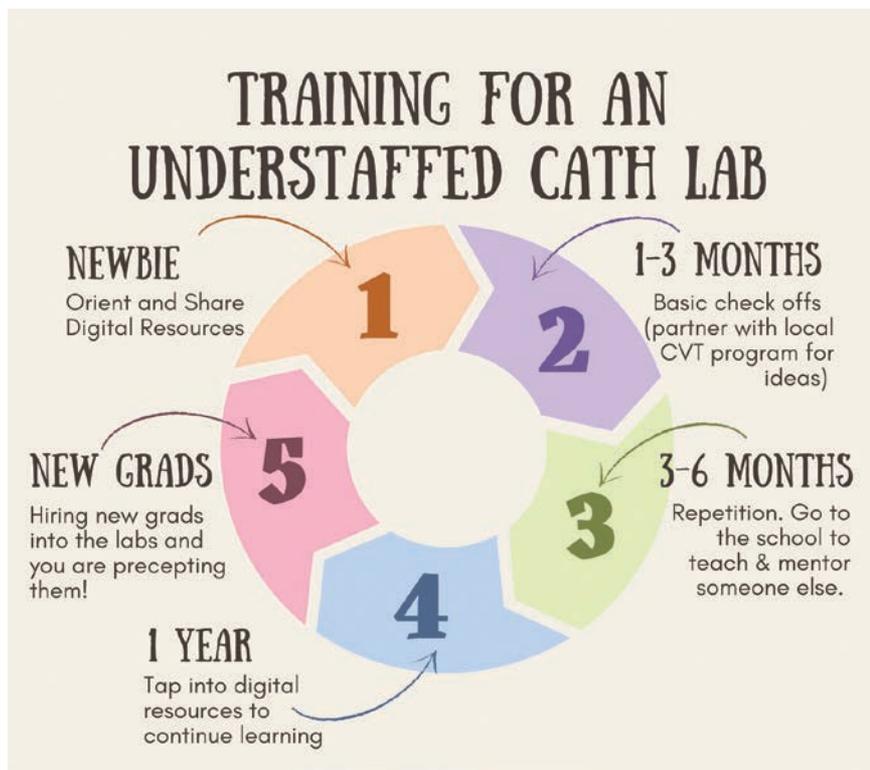
As an educator in the cath lab community of Central Florida, I consider myself fortunate to work in an area that boasts 3 large hospital systems and approximately 18-20 cath labs within a 2-hour radius. While there is certainly competition among hospitals to attract talented employees, the educators and leaders within these departments understand the shared challenges posed by the COVID-19 pandemic. At one point, there were over 60 job openings in the cath lab, and many labs were forced to pull staff from other areas of the hospital and train them from scratch. This was a difficult situation for everyone involved.

What was truly inspiring during and after the COVID-19 pandemic was the way in which the cath lab community of Central Florida came together to support one another. Despite being competitors, leaders and educators within and across hospital systems engaged in meaningful conversations about how to overcome the challenges presented by the pandemic. They asked each other, "What resources do you have to help cross-train staff?" and "What strategies did you use to ensure patient care was not compromised?" These conversations were a testament to the community's willingness to share knowledge and expertise for the benefit of all.

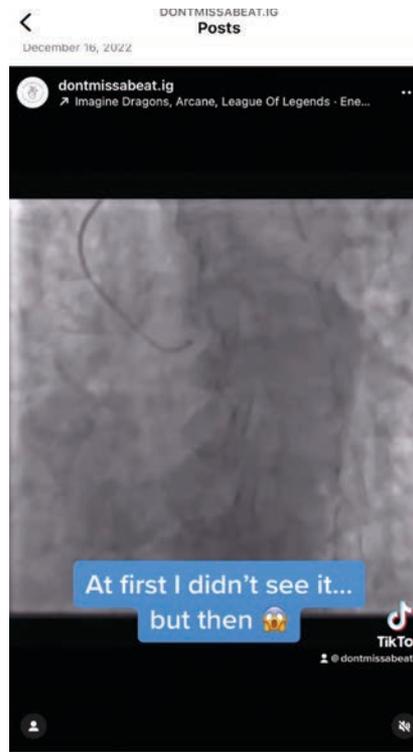
Notably, this spirit of collaboration was not limited to leadership and educators. Even at the staff level, there were shared relationships and friendships between individuals from different institutions. It was clear that, despite silos, the priority of all involved was ensuring that patients continued to receive the highest quality of care possible.

### Simulation-Based Training

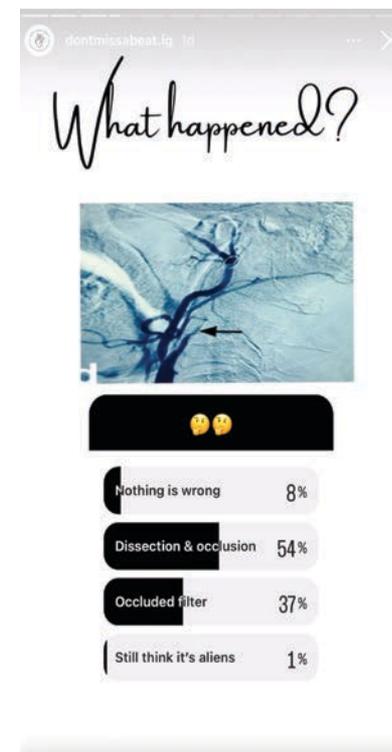
Simulation-based training is an increasingly popular way to provide hands-on experience to



**Figure 1.** Training for an understaffed cath lab. A strategy for those labs seeking to recruit and train through partnership with local colleges, but who may not have adequate training strategies for their own staff.



**Video 1.** Screen recording of @dontmissabeat.ig social media platform featuring helpful training posts and case review videos.



**Video 2.** Screen recording of @dontmissabeat.ig social media platform featuring daily quizzes.

healthcare professionals without compromising patient safety. This type of training is especially useful for complex procedures, such as transcatheter aortic valve replacement (TAVR), MitraClip (Abbott Vascular), Impella (Abiomed) and atherectomy, where precise skills are necessary. Simulation-based training can replicate the real-life experiences of healthcare professionals, allowing them to practice a wide range of procedures and scenarios in a safe and controlled environment.

One example of a simulation-based training tool is Symbionix (Surgical Science), a high-fidelity simulator that offers a realistic and immersive training experience. Medical device representatives can provide simulators that allow healthcare professionals to practice the use of their products in a simulated environment. Simulation-based training can improve patient outcomes, reduce the risk of errors, and increase staff confidence and competence.

**Continuing Education**

One way to provide comprehensive training to staff in a cost-effective manner is to bring in an experienced instructor to train an entire department over a period of 1 to 2 days. This not only saves individuals from having to pay out of pocket for a training program, but also shows the hospital values the education and professional development of its staff. Additionally, providing incentives for staff to pursue additional training or certifications can boost morale and keep healthcare professionals motivated to continue learning and improving their skills. By identifying areas of training that can enhance patient care in the cath lab, hospitals can ensure

that their staff is well-equipped and confident in complex cases.

Providing staff with opportunities for personal and professional development can improve morale and retention rates. Developing mentorship programs and creating opportunities for staff to share their expertise can also help healthcare facilities build a strong and knowledgeable workforce.

**Conclusion**

As patients become sicker and more complex, and new technologies continue to emerge, it can be overwhelming for healthcare professionals in the cath lab, particularly those who are cross-training with no prior experience in the field. It is important for healthcare facilities to recognize these challenges and provide comprehensive training programs that address the latest advancements in the field, including the expanding structural heart and peripheral space. The COVID-19 pandemic has further highlighted the need for ongoing education and training, as healthcare professionals have had to adapt quickly to new protocols and safety measures.

Confidence is a key component in providing quality care in any healthcare setting. And knowledge is one of the main drivers of confidence. By investing in training and education for their staff, healthcare facilities can help build the knowledge base and skills of their staff, which in turn can lead to increased confidence and better patient outcomes. When healthcare professionals feel confident in their abilities, they are more likely to perform at their best and deliver the highest quality care possible. ■

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