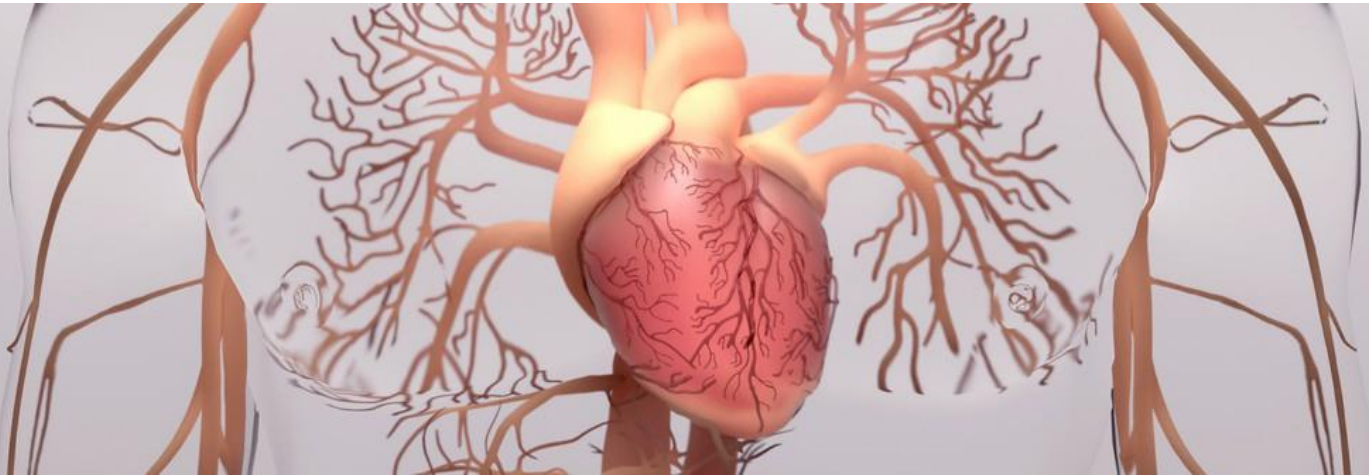


# Advanced Cardiac Imaging Demand is Increasing—Are You Ready?



By Robert Falk, MD, Founder, Managing Director, and Chief Medical Officer, 3DR Labs



## INTRODUCTION

In the past 20 years, we've seen cardiac imaging dramatically advance. Echocardiography has become much more sophisticated, and both computed tomography (CT) and magnetic resonance imaging (MRI) have emerged as essential tools in evaluating patients with heart disease. Coronary CT angiography (CCTA) is an effective, noninvasive tool that can not only help clinicians determine whether a patient needs invasive coronary angiography but can help in planning coronary interventions as well.<sup>1</sup>

Given the unique demands of cardiac imaging, outpatient imaging centers and most community hospitals have been slow to adopt CCTA. Instead, advanced cardiac imaging has been offered primarily at academic medical centers and sophisticated community hospital settings. But that is changing.

In October 2021, the American College of Cardiology, the American Heart Association, and other accredited organizations elevated CCTA to a level 1 tool for the evaluation of chest pain in patients without known coronary artery disease who have stable and acute chest pain.<sup>2</sup> The new guideline is based on more than a decade of research demonstrating that as a frontline strategy, CCTA is efficacious, noninvasive, and cost-effective. The recommendation – affecting an estimated 15 to 20 million patients annually<sup>3</sup> – is causing a surge in demand for CCTA capability at imaging facilities nationwide.

It's time for imaging departments to prepare for a significant increase in demand for advanced cardiac imaging. Does your imaging department have the resources and skills necessary to meet the need?

To evaluate your department's readiness, here are **six key questions** to ask yourself.

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1. Georgios Tzimas, Gaurav S. Gulsin, Hidenobu Takagi, Niya Mileva, Jeroen Sonck, Olivier Muller, Jonathon A. Leipsic, Carlos Collet. Coronary CT Angiography to Guide Percutaneous Coronary Intervention. *Radiology: Cardiothoracic Imaging*. Vol. 4, No. 1. January 2022. <https://pubs.rsna.org/doi/10.1148/ryct.210171>.

2. Society of Cardiovascular Computed Tomography. CCTA receives Multiple Class 1, Level A recommendations in 2021 New Chest Pain Guideline. October 28, 2021. Retrieved from: <https://scct.org/news/585062/CCTA-receives-Multiple-Class-1-Level-A-recommendations-in-2021-New-Chest-Pain-Guideline-.htm>. Accessed June 28, 2022.

3. *Ibid.*

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## 6 KEY QUESTIONS TO EVALUATE YOUR DEPARTMENT'S READINESS

### 1 Is our equipment ready?

In most cases, the answer is yes. Advanced cardiac imaging technologies typically do not require investments in new equipment. Cardiac CT requires a minimum of 64-slice capability, which is standard in most facilities. Cardiac MRI requires certain software packages and pulse sequence capabilities, which can be installed for use with current MRI equipment.

### 2 Is our staff capable?

Advanced cardiac imaging requires specialized expertise both to capture the images correctly and to care for patients appropriately during the exam. Your department's experienced imaging staff may indeed be capable, but they will need additional training:

- ◆ CT and MRI techs need to be properly trained on anatomy and scanning techniques.
- ◆ Nurses need to be trained on medications commonly administered for scanning.

While cardiac imaging isn't necessarily hard, it is different and requires new skill sets. And to be effective, excellent quality images are essential.

### 3 Are our radiologists capable?

The interpretation of these sophisticated exams often requires radiologists with additional training and expertise in cardiac disease. Most radiology groups don't have physicians with this specific training, much less enough radiologists to provide 24/7/365 coverage.

Some facilities will choose to develop CCTA expertise within their radiology practices, while others will opt to outsource CCTA interpretation to a dedicated cardiac imager through teleradiology.

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### 4 Can our imaging department handle the increased demand?

In addition to training staff to perform CCTA, many imaging departments will need to scale up to meet the increased demand for emergency CCTA. Staff trained in CCTA image capture and patient care, and radiologists trained in CCTA interpretation, will need to be available 24/7/365.

### 5 Is our 3D lab capable?

Post-processing of images prior to interpretation is a critical step in the process. Your department will need to have technologists available around the clock to post-process CCTA emergency studies, as well as technologists with the knowledge and skill sets to accurately process sophisticated CT and MRI studies on a routine basis. While building in-house 3D post-processing capability is one option, it's also possible to outsource to a commercial 3D lab.

### 6 What resources or partners do we have available to help meet this need?

To help address the growing demand for advanced cardiac imaging, 3DR Labs has established a Cardiac Center of Excellence. By dedicating a team of highly skilled and experienced radiologic technologists and physician advisors 24/7/365 to cardiac imaging, 3DR Labs provides customers with advanced post-processing services of the highest quality, with shortened turnaround times.

With extensive experience in cardiac anatomy, disease processes, and image evaluation, our cardiac team specializes in processing the most technologically advanced cardiac imaging procedures.

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Asking these questions is the first step toward evaluating your department's readiness to handle the coming challenge of advanced cardiac imaging. Knowing where your department stands will help you develop the best course of action. The time to start planning is now.

**Allow our team of experts to guide you through this process and prepare you for the imaging demands ahead.**

## ABOUT DR. FALK

Robert Falk, MD, has been a practicing radiologist in Louisville, KY since 1987. He completed his medical training, including medical school, internship, radiology residency and neuroradiology fellowship at The Medical College of Wisconsin in Milwaukee, WI. Dr. Falk has deep expertise in neuroradiology with additional experience in body imaging, musculoskeletal, cardiovascular disease, and advanced 3D image manipulation.

Dr. Falk is past president of the Jewish Hospital Medical Staff and former vice chair of the Jewish Hospital Healthcare Services Board of Trustees. He has served on the board of directors and executive committee of The Physicians Incorporated in Louisville, and as the physician representative for Jewish Hospital to The Leadership Institute.

Dr. Falk founded 3DR Labs, LLC in 2005 and still maintains a busy private practice while continuing to advance 3DR Labs' offerings.

## ABOUT 3DR LABS

Headquartered in Louisville, Kentucky, 3DR Labs, LLC, the largest 3D medical image post-processing lab in the U.S., provides 24/7/365 access to more than 200 expert radiologic technologists.

Founded in 2005, 3DR Labs provides services to hundreds of hospital imaging departments, stand-alone imaging centers, and radiology practices. Turnaround times for CT and MRI exams are guaranteed within hours or even minutes.

3DR Labs also offers Imaging Excellence Advisory Services where our expert imaging advisors provide creative, practical, and sustainable solutions for your most difficult department challenges. With 3DR Labs, hospital imaging leaders have access to a high level of expertise and experience a truly collaborative relationship.