

Noninvasive cardiac imaging: An urgent opportunity for Colombian radiology

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Guest Editor

Over the past two decades, non-invasive cardiac imaging has undergone remarkable advancements, establishing it as a first-line diagnostic tool in numerous clinical settings in modern cardiology. Cardiac computed tomography (CT) and cardiac magnetic resonance imaging (MRI) have evolved from emerging techniques to become essential methods for the anatomical, functional, and tissue-level assessment of the heart.

I have had the privilege of observing this transformation firsthand over more than 20 years of practice in the field of non-invasive cardiac imaging. During this time, both modalities have consistently demonstrated their clinical value, not only because of their high diagnostic accuracy but also because of their positive impact on patient clinical outcomes. This evidence has led to their validation and inclusion in the most recent guidelines of the leading American and European scientific societies of cardiology, in which cardiac CT and MRI now occupy a prominent place.

The importance of this topic is unquestionable. Cardiovascular disease remains the leading cause of morbidity and mortality in Colombia and worldwide, underscoring the need for accurate, safe, and cost-effective diagnostic strategies. In this context, it is particularly significant that most radiology departments in the country currently have CT and MRI equipment capable of performing advanced cardiac studies. However, the availability of technology alone does not guarantee proper implementation.

Cardiac CT and MRI studies must be interpreted by professionals with specific training in cardiac imaging—whether radiologists or cardiologists—who possess a thorough understanding of cardiac anatomy, pathophysiology, acquisition protocols, and interpretation criteria. Despite the many attractive features of these techniques—their non-invasive nature, strong scientific evidence, and growing clinical demand—there is still, generally speaking, a lack of commensurate interest and enthusiasm within the national radiology community.

Furthermore, the proper development of cardiac imaging in the country must be accompanied by the creation of a framework to guide and regulate its practice. This framework should establish quality standards for the implementation of services, as well as technological requirements and professional certification processes that ensure optimal practice and high-quality care.

As a professional association, we have a responsibility to reflect on this reality and act accordingly. It is imperative to create a supportive environment that promotes the development of non-invasive cardiac imaging in Colombia through structured training opportunities. For example, the implementation of a robust annual academic program in cardiac imaging, covering everything from the basics to the most complex and cutting-edge topics. Similarly, regional activities could be strengthened through hands-on workshops that allow for more personalized learning.

In collaboration with universities, it is essential to promote formal academic training programs in cardiac CT and MRI, supported by appropriate technology, experienced and qualified faculty, and a sufficient patient volume to ensure comprehensive, high-quality training.

The creation of a Council on Non-invasive Cardiac Imaging within the Colombian Association of Radiology could be a strategic first step toward establishing a clear path for the implementation, standardization, and expansion of these techniques in our country, always with the ultimate goal of benefiting patients.

It is time to act. The future of non-invasive cardiac imaging in Colombia is in our hands.

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