

EDITOR'S PAGE



The Amara Yad Project

A New Resource for Cardiac Anatomy



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Anatomy has been fundamental to medicine since its inception, with anatomical atlases serving as indispensable tools for health professionals. From Vesalius' groundbreaking 16th-century illustrations to modern imaging techniques, anatomical knowledge has shaped medical understanding and practice. The heart has particularly captivated artists and scientists across cultures and centuries, including the American College of Cardiology seal, which features a heart illustration derived from Vesalius' work.¹

JACC is proud to introduce the Amara Yad Project, a groundbreaking initiative demonstrating how medicine can address its darkest historical legacies through concrete action. This initiative creates a new standard in anatomical education by delivering ethically produced, technologically advanced atlases that exceed their predecessors in both moral and scientific terms.

THE AMARA YAD PROJECT: HONORING VICTIMS THROUGH ACTION

The Amara Yad Project is a physician-led initiative with a singular mission: to honor the victims of medical exploitation by creating ethical and accessible anatomical resources. Its name combines the Sanskrit word *Amara* (immortal) and the Hebrew word *Yad* (hand), symbolizing a commitment to

remembrance and purpose. This initiative transforms moral outrage into concrete action, creating ethically sourced, superior alternatives to replace resources tainted by historical wrongs.

Between 1938 and the end of World War II, Eduard Pernkopf, an anatomist at the University of Vienna, produced anatomical atlases using the bodies of >1,300 victims of Nazi terror.² Their meticulous hand-drawn illustrations, with unprecedented anatomical detail and surgical precision, became essential references in medical education and clinical practice, capturing subtle relationships that even modern imaging has struggled to convey. Yet these works, widely regarded as clinical necessities, were later revealed to have been created under inhumane and unethical circumstances. Swastikas and SS insignia, once present in the illustrators' signatures, were erased from subsequent editions to obscure their origins.³

Although awareness of the Pernkopf atlases' origins has grown, their continued use in medical education has created an untenable ethical dilemma: physicians must choose between compromising their moral principles and practicing without these detailed anatomical references.⁴ The Amara Yad Project addresses this critical void, creating a definitive medical education resource that matches or exceeds the technical excellence of historical works while upholding the highest ethical standards.

FIGURE 1 Transilluminated Heart



Transilluminated image of a pressure perfused heart showing the aortic root and mitral valves seated on the left ventricular ostium. (From the UCLA Amara Yad-McAlpine Collection.)

A PURE AND OPEN RESOURCE

As its first initiative, the Amara Yad Project has launched a new generation of anatomical atlases, starting with *The Anatomical Basis of Cardiac Interventions*, a 7-volume series dedicated to cardiac anatomy.^{5,6} These atlases represent a significant advancement, combining historical excellence with cutting-edge technology. The team uses advanced preservation and pressure perfusion techniques to capture unprecedented anatomical detail through high-resolution 3-dimensional imaging. The atlases integrate progressive dissection sequences, 3-dimensional viewing through specialized anaglyphs, and clinically oriented perspectives optimized for modern interventional procedures.

Building on Wallace McAlpine's enduring methods, these works integrate his renowned cardiac depictions with state-of-the-art imaging approaches. Available in print and digital formats, they are open access, ensuring they are freely available to all. Created by practicing cardiologists rather than anatomists, they offer practical guides directly correlating with contemporary surgical techniques and imaging technologies (Figure 1).

Future phases of the project will expand to cover the entire human body, establishing a comprehensive resource for medical education. Each volume will uphold these same rigorous technical innovation and clinical relevance standards. This work is a testament to the profession's commitment to integrity, knowledge, and the highest moral standards.

DEDICATION

The Amara Yad Project bridges past and future, honoring both those who have selflessly donated their bodies for science and the victims of medical exploitation whose memory demands corrective action. By confronting historical transgressions while producing resources that uphold human dignity, we create a foundation for future generations to advance medical knowledge with unwavering commitment, transforming acknowledgment of past wrongs into concrete actions that ensure principled progress.

JOIN US ON THIS JOURNEY

Through this collaboration, JACC and the Amara Yad Project aim to shape the future of cardiovascular science and education. We invite you to explore these images as scientific resources and evidence of our profession's commitment to addressing ethical wrongs. They embody the values of transparency, integrity, and excellence while charting a path that transforms acknowledgment into meaningful change. Let these images inspire us to advance science while remaining vigilant guardians of human dignity—ready to act whenever and wherever we encounter violations of our sacred duty to patients and humanity.

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