

## HOW TO

# Developing a Clinical Cardio-Oncology Program and the Building Blocks for Success



## JACC: CardioOncology How To

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It is estimated that 40% of people will be diagnosed with cancer in their lifetime; however, newer cancer treatments have significantly improved clinical outcomes.<sup>1</sup> Despite their benefits, many cancer therapeutics are associated with cardiovascular side effects that can independently affect a patient's morbidity and mortality. Given the complexity of cancer treatment, dedicated cardio-oncology programs are necessary to provide optimal care for this patient population.<sup>2</sup> There has been a significant increase in the number of programs in both the academic and community setting, and whereas certain aspects are unique to an individual practice, there are also specific building blocks that are universal to the success and growth of any cardio-oncology program (Figure 1).

### BUILDING BLOCKS

#### BLOCK 1: DEVELOP A CLEAR MISSION AND VISION.

When developing a cardio-oncology program, it is important to clearly define the goals for the program both clinically and academically. It is especially helpful to create a mission and vision statement to help guide program development. The primary difference between a mission and a vision statement is the timeline—a mission statement defines what an

organization is currently doing (it speaks to today), whereas a vision statement is future focused, describing the ultimate goal you are hoping to accomplish. For many cardio-oncology programs, the vision is quite standard—to eliminate cardiovascular disease as a barrier to effective therapy in cancer patients and survivors. The mission statement is more nuanced and specific, helping to maintain focus on programs goals and priorities. As part of the mission statement, it is important to define the target cardio-oncology population for your program, which may be narrow or broad. Although there is no one correct answer, it is important to define this early in the development of a program.

**BLOCK 2: FOSTER PARTNERSHIPS.** Cardio-oncology is a multidisciplinary specialty, and the foundation of any successful program is the partnership and cooperation between cardiology and oncology. Program success cannot be achieved without the philosophical alignment of these 2 specialties. The goal is to ensure cardiovascular health and safety while allowing the patient to continue their cancer treatments. It is essential to identify individuals who will lead the program, focusing on the advancement of its mission and vision to ensure its overall success. Ideally, both a cardiologist, with specific training in cardio-oncology, and an oncologist will work together to

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**ABBREVIATIONS  
AND ACRONYMS**

**APP** = advanced practice provider

**ICOS** = International Cardio-Oncology Society

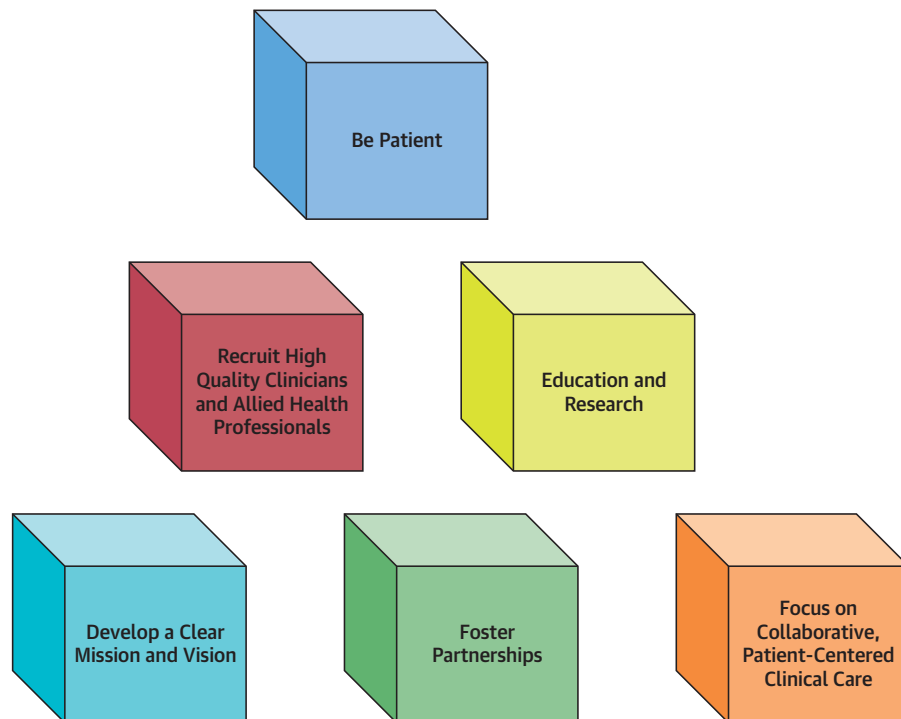
foster program development. Having an oncologist in a leadership role adds legitimacy, demonstrates the commitment of the program to cancer patients, and is critical for success.<sup>2,3</sup>

Although partnerships often happen organically, it may also take effort to develop relationships, especially in the community setting where cardiology and oncology may not be part of the same multispecialty practice. Reaching out directly to oncologists via phone calls or emails can initiate a connection; however, direct face-to-face meetings are likely to be most successful. In addition to one-on-one meetings with referring oncologists, program leadership should consider regularly attending the various oncology tumor board meetings. This is a way to facilitate introduction of the program to oncologists and is also an opportunity for cardiologists to learn more about oncologic treatment decisions and provide cardiovascular input.<sup>2-5</sup>

**HIGHLIGHTS**

- Cardio-oncology programs are necessary to provide optimal cardiovascular care to cancer patients and survivors.
- Focus on developing a clear vision and mission—successful programs must be tailored to an organization's unique landscape.
- Fostering partnerships with cardiologists and oncologists to provide high-quality patient-centered care is crucial.
- Patience is essential—program development takes time, but success can be achieved.

**FIGURE 1** Building Blocks for Successful Cardio-Oncology Program Development



Six proposed concepts that are essential for successful cardio-oncology program development: 1) develop a clear mission and vision; 2) foster partnerships; 3) focus on collaborative, patient-centered care; 4) recruit high-quality clinicians and allied health partners; 5) incorporate research and education; and 6) be patient.

It is crucial that the larger health care organization recognizes value in developing a cardio-oncology program. Value can be defined differently but could be financial, clinical, academic, or a combination. When developing a program, the vision of the program leader must align with that of the organization. Although the goals can evolve over time, it is important to identify organizational priorities, particularly during the early stages of program development. Aligning missions is essential for both the short- and long-term success of the program. Although physician leadership is important, it is also necessary to identify and work with a business administrator to help ensure operational success, including strategic budgetary planning. When requesting support from the organization, it is important to demonstrate the financial return on investment, which can be achieved with appropriate downstream cardiovascular testing and, hopefully, reduction in health care utilization dollars by preventing adverse events in these patients.<sup>2,5,6</sup>

The patient is at the center of any cardio-oncology program, and developing patient-focused partnerships is also essential. Working with various oncology advocacy groups and community health programs is an ideal way to disseminate information to patients and their caregivers about the importance of cardio-oncology. This can take the form of meetings or educational handouts. Not only will this help to grow the cardio-oncology program, but it also empowers patients to take an active role in their health care while also promoting health equity.

Developing partnerships also extends beyond the local environment, and it is worthwhile to connect with individuals who have already successfully implemented cardio-oncology programs. The International Cardio-Oncology Society (ICOS) and the American College of Cardiology Cardio-Oncology Leadership Council can serve as resources for identifying these individuals. One could consider setting up focused meetings with thought leaders and, if possible, schedule a site visit to their institution to allow for direct observation and learning. Social media is an excellent place to foster external relationships to build one's own personal brand as well as that of the cardio-oncology program.<sup>7</sup>

**BLOCK 3: FOCUS ON COLLABORATIVE, PATIENT-CENTERED CLINICAL CARE.** It bears mentioning that cardiologists and oncologists do not practice in isolation, and a team-based approach is necessary to ensure optimal patient outcomes. It is important to identify subspecialty cardiology partners to collaboratively develop comprehensive care plans and provide procedural

interventions if necessary. Having subspecialists already integrated into the cardio-oncology team minimizes uncertainty and delays in the treatment of patients.<sup>4</sup> Moreover, it is important to understand the landscape of the organization's oncology program. Particularly in a community setting, certain diseases may be over- or under-represented. Some programs will see all types of cancer patients, whereas others may have a narrower focus. Cardio-oncology leaders should tailor the program to meet the needs of the practicing oncologists and their patients in order to provide excellent patient care.

With the establishment of a program, it is particularly helpful to develop standardized processes and care plans to help improve efficiency and patient outcomes. This often involves leveraging the electronic medical record to create a uniform referral process. It is also advisable to develop standardized treatment protocols so that every patient receives the same high-quality care within the institution. The recently published European Society of Cardiology Cardio-Oncology guidelines can serve as a roadmap for creating these practices.<sup>8</sup> For example, protocols for echocardiographic imaging before and after anthracycline treatment can be built into oncology order sets. Additionally, the development of electronic medical record-based alerts/nudges can help ensure the echocardiograms occur at the appropriate time points.

**BLOCK 4: RECRUIT HIGH-QUALITY CLINICIANS AND ALLIED HEALTH PROFESSIONALS FOR YOUR TEAM.**

The individuals leading the program should have a commitment to patient care. They should not only maintain board certification in the primary specialty (ie, cardiovascular disease or medical oncology), they should also have additional training (ideally completing a dedicated cardio-oncology fellowship) and expertise specifically in the field of cardio-oncology. ICOS now offers board certification, and it is recommended that the cardio-oncology physician team obtain and maintain certification requirements.

Beyond physicians, a successful cardio-oncology program incorporates allied health providers including nurses, pharmacists, and advanced practice providers (APPs). A nurse coordinator is especially important and can play a key role in the education of both patients and staff. A nurse coordinator ensures seamless transitions of care for patients between teams including the inpatient and outpatient settings. Nurse coordinators have consistently been shown to enhance both the patient and provider experience in various health care settings.<sup>2,9</sup>

APPs and pharmacists are also invaluable members of the care team and bring their own unique skills and expertise to patient care. Utilizing APPs and pharmacists, at their fullest scope of practice, can enable a cardio-oncology program to run efficiently and increase capacity while still providing high-quality, patient-oriented care. Moreover, pharmacists help providers recognize potential toxicities of cancer drugs as well as dangerous drug-drug interactions. APPs, pharmacists, and nurses should all be encouraged to attend cardio-oncology meetings and participate in profession-focused cardio-oncology activities such as the ICOS Nursing and Pharmacy work groups.<sup>5,10</sup>

**BLOCK 5: EDUCATION AND RESEARCH.** A well-rounded cardio-oncology program places value on educational endeavors aimed at clinicians as well as patients. Cardio-oncology educational programs, regardless of the target audience, should revolve around a core curriculum. Until accreditation of cardio-oncology fellowships is established, didactics should be integrated into general cardiology and hematology/oncology fellowship training. Additionally, a structured experience in an outpatient cardio-oncology clinic service is essential for adequate cardio-oncology exposure and training. This should be complemented by the active participation in various oncology and survivorship clinics to facilitate cross-disciplinary education and collaboration. Although it is ideal for learners to evaluate cardio-oncology patients in the inpatient setting, a dedicated service may not be established; an alternative would be to follow outpatients when admitted for various oncologic or cardiovascular issues. Additionally, comprehensive multidisciplinary cardio-oncology programs should consider offering focused rotations for learners from institutions with fewer

resources, ensuring educational and health care equity. Finally, establishing protected time for research or other scholarly pursuits is an integral component of most academic training programs in cardio-oncology; however, community cardio-oncologists can also participate in research by enrolling patients in multicenter trials and registries.<sup>11</sup>

**BLOCK 6: BE PATIENT.** It is critical to recognize that the start will be slow. New cardio-oncology programs may struggle with developing relationships and establishing referral patterns. It may be appropriate to begin with a single common cancer, for example, breast cancer, and identify an enthusiastic oncologist who will collaborate with you and refer patients at each stage of treatment. The “slow” start experience becomes the fundamental building block to understand the needs, care patterns, and nuances of consultative care that are unique to the institution. It frequently takes 1 to 3 years to nurture and establish a successful program, but following the recommendations set forth in the various building blocks in the preceding text can serve as a foundation for the creation and implementation of a successful comprehensive program, agnostic of the practice type or location.

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