

RESPONSIBILITIES OF CARDIOLOGY FELLOWS DURING CARDIO-ONCOLOGY FELLOWSHIP (12 MONTHS)

- I. **Overview:** The one-year cardio-oncology fellowship is designed for cardiology fellows who plan to devote a significant amount of their practice to cardio-oncology. Graduates of the fellowship will be experts in the screening, prevention, and treatment of cardiotoxicity of cancer therapies as well as the diagnosis and management of amyloidosis. While flexible, the year will generally consist of 6 months with a clinical cardio-oncology focus including outpatient and inpatient care and 6 months devoted to research and outside interests that could include advanced imaging, endomyocardial biopsy training, rotations on oncology or hematology, masters classes in investigation or research, or other specific areas of interest to the fellow. Washington University will work directly with the fellow to design a year that optimizes cardio-oncology and amyloidosis training in line with the trainee's interests.

- II. **The Cardiology fellow on the Cardio-Oncology Service will be expected to do the following during the 6 clinical months:**
 - a. Outpatient Responsibilities
 - i. Attend three half-day Cardio-Oncology clinics per week. Cardio-Oncology clinics are Mon, Tue, Weds, and Fri at the Center for Advanced Medicine. Clinics are also held at the West and South County locations and can be attended if desired or appropriate for the fellow.
 - ii. On non-clinical months, the fellow will be still expected to maintain one continuity clinic per week in cardio-oncology.
 - b. Inpatient Responsibilities
 - i. Perform inpatient Cardio-Oncology consultation and follow patients known to the Cardio-Oncology service.
 - ii. Participate in Cardio-Oncology clinical rounds Monday through Friday.
 - c. Call and Weekend Responsibilities
 - i. Fellows on the Cardio-Oncology service are not expected to take primary call and are not expect to round on the weekends.
 - d. Educational expectations
 - i. Participate in all multidisciplinary meetings related to Cardio-Oncology and Amyloidosis, presenting at least one clinical case. Meetings include Amyloid Center of Excellence Meeting (1-2 times/month) and Monthly ICOS Webinars.
 - ii. Fellows are expected to engage in a research project during their Cardio-Oncology rotation. This may include clinical studies, chart review, or case report presentation.
 - e. Recognition
 - i. Graduating fellows will be deemed experts in cardio-oncology, a rapidly growing and increasingly important subspecialty of cardiology.

- III. **Educational Goals of the Rotation**
 - a. Identify risk factors for cardiotoxicity, including pre-existing heart disease and genetic factors, and the implications for cancer treatment
 - b. Recognize the chemotherapeutic, biological, and radiation therapies associated with cardiovascular toxicities.
 - c. Understand and manage the cardiac emergencies pertinent to cancer and cancer therapy, including pericardial tamponade.
 - d. Understand the prognosis and usual treatment options for common cancers with cardiovascular implications.

- e. Become familiar with the types of systemic amyloidosis, the cardiac implications, pertinent diagnostic studies, and therapies.
- f. Manage hypertension in patients treated with tyrosine kinase inhibitors.
- g. Identify best practices for the integration and functioning of the cardio-oncology team to improve patient outcomes
- h. Incorporate guidelines from the cardiology and oncology societies into clinical practice
- i. Recognize appropriate imaging modalities to assess cardiotoxicity, and distinguish the strengths and weaknesses of each cardiac monitoring modality, including echocardiography, strain, CT, MRI, and nuclear imaging

IV. Competencies:

- **Patient Care:** The fellow is expected to gain greater expertise in cardio-oncology. Patients are seen in consultation and the fellow may interact with other medical subspecialists, internal medicine attendings, surgeons, and other non-medical specialists. The fellow will learn to help coordinate care between multiple services.
- **Medical Knowledge:** The fellow will be expected to research the clinical trials that support the therapy of these patients. It is expected that the fellow will present the results of trials which are germane to the care of their patients.
- **Practice-based Learning and Improvement:** All trainees must understand the limitations of their knowledge and accept constructive feedback. In addition, the fellow must understand the variability of patient care styles of different attending physicians.
- **Interpersonal and Communication Skills:** The fellow must demonstrate caring and respect for all patients and families. The fellow must conduct supportive and respectful discussions goals of care. The fellows will facilitate the learning of students and residents.
- **Professionalism:** The fellows will demonstrate respect and compassion. The fellows will understand that they are the representatives of the Cardiovascular Division even when off-service and will be expected to perform in a professional manner at all times. The fellows will appreciate the diversity of ethical, religious, and socioeconomic factors which impact patients and their families and their response to healthcare professionals.
- **System-based Practice:** The fellow must work well in a complex system of nurses, social workers, and other healthcare professionals. The fellow will try to facilitate the transition from inpatient to outpatient and will utilize appropriate resources to continue high quality care as an outpatient. Relationships cultivated with the oncology team help improve patients with combined oncologic and cardiac disease who are co-managed by these services.
- **Teaching Methods:** The primary mode of learning for inpatient care will be through teaching rounds with the attending physician. Teaching rounds will occur 5 days/week. The fellow is expected to assure that the residents and students are prepared to present the appropriate data at teaching rounds. The primary mode of learning for outpatient care will be through direct and indirect supervision of clinic encounters by the attending physician. Fellows will gather data, develop a plan, and present to the attending physician.
- **Conferences:** The fellow is expected to participate in all multidisciplinary conferences pertinent to Cardio-Oncology, including amyloidosis.
- **Evaluation Methods:** At the end of each four-week block, the fellow will meet with the attending for feedback. One attending will be asked to complete the evaluation in *MyEvaluations.com* after consulting the other attendings.

V. Goals for the development of Cardio-Oncology as a discipline:

- Manage health care costs
- Avoid polypharmacy
- Improve the application of guideline based diagnosis and treatment
- Be mindful of over testing and defensive medicine
- Carefully assess barriers to effective clinical care
- Commit to collective research in the field
- Share our experiences with other colleagues

VI. Principles for the practice of Cardio-Oncology

- Understand the patient is vulnerable and is asked to do a lot already.
- You can provide your best cardiac care and that will prevent or minimize cardiac limitation.
- A quality cardiovascular consultation will have a huge impact on the cancer care provided.
- A vibrant collaboration with other colleagues outside of your primary area is very rewarding
- Disciplined reporting of clinical observations is imperative for patient safety.
- Keep your mind open to new observations because we do not have a long history and comfort with new medications and treatments.
- Patients and families are universally appreciative of an effective health care team that communicates well.

I HAVE READ AND UNDERSTAND THE GOALS AND OBJECTIVES FOR THE CARDIO-ONCOLOGY ROTATION.

Print Name

_____/_____
Signature

Date

Cardio-Oncology Rotation Diagram (Clinical Month)

During the Cardio-oncology focused months, the fellow will be expected to attend three of the ½ day cardio-oncology clinics per week. The following is an example schedule based on attendance of M, W, and F clinics.

Week	Monday	Tuesday	Wednesday	Thursday	Friday
1	AM – Cardio Oncology Clinic	AM - Research	AM – Cardio Oncology Clinic	AM – Research*	AM – Cardio Oncology Clinic
	PM – Inpatient Rounding	PM – Inpatient Rounding	PM – Inpatient Rounding*	PM – Inpatient Rounding	PM – Inpatient Rounding
2	AM – Cardio Oncology Clinic	AM - Research	AM – Cardio Oncology Clinic	AM – Research*	AM – Cardio Oncology Clinic
	PM – Inpatient Rounding	PM – Inpatient Rounding	PM – Inpatient Rounding*	PM – Inpatient Rounding	PM – Inpatient Rounding
3	AM – Cardio Oncology Clinic	AM - Research	AM – Cardio Oncology Clinic	AM – Research*	AM – Cardio Oncology Clinic
	PM – Inpatient Rounding	PM – Inpatient Rounding	PM – Inpatient Rounding*	PM – Inpatient Rounding	PM – Inpatient Rounding
4	AM – Cardio Oncology Clinic	AM - Research	AM – Cardio Oncology Clinic	AM – Research*	AM – Cardio Oncology Clinic
	PM – Inpatient Rounding	PM – Inpatient Rounding	PM – Inpatient Rounding*	PM – Inpatient Rounding	PM – Inpatient Rounding
* Wednesday PM Amyloid Center Meeting 1-2x/month (check schedule with attending)					
* ICOS Webinar once/month (check schedule with attending)					