

# PGY2 ONCOLOGY PHARMACY RESIDENCY DETAILS

## Summary of Rotations and Requirements

### Core Rotations:

- **Orientation (one month)**
  - Orientation to the hospital, pharmacy, drug distribution systems, computer systems, unit dose and IV admixture programs. The resident will receive a general introduction to the hospital which will include an orientation by the official hospital human resources department, pharmacy department/residency program, mentorship program, research program and hospital systems training by pharmacy informatics. The resident will then spend concentrated training in the inpatient IV room, inpatient hospital distribution area, IV chemotherapy compounding room and oncology pharmacy distribution role in the oncology pharmacy satellite.
  
- **Inpatient Medical Oncology (two months)**
  - The resident is expected to provide clinical pharmacy services to all medical/oncology (MO) patients. The resident will participate in daily patient care rounds with the MO Service. The oncology pharmacy resident is responsible for identifying and resolving any medication-related issues for all patients on the service. The MO team consists of an oncology attending physician, 1-2 oncology fellows, medical residents, a pharmacist, PGY2 oncology pharmacy resident, +/- PGY1 pharmacy resident, medical/pharmacy students. The MO service primarily services the solid tumor patient population; however, patients with hematological disorders are also treated. Malignancy types most commonly cared for by the MO service include head and neck, pancreatic, breast, colorectal, lung, renal cell, and melanoma cancers. Daily patient care rounds are a required component of this rotation experience and residents are required to round 6 days a week. Expectations of the resident will increase from the first to the second month of rotation. The first month of MO is expected to be completed near the beginning of the residency year and the second month is required to be completed in the second half of the residency year.
  
- **Inpatient Bone Marrow Transplant (two months)**
  - The resident is expected to provide clinical pharmacy services to all patients on the bone marrow transplant (BMT) service, which is comprised primarily of patients with leukemia, lymphoma, multiple myeloma, and other hematological malignancies. The resident will participate in daily patient care rounds with the BMT Service. The BMT team normally consists of an attending physician, oncology fellow, nurse practitioner, nurse clinician, and pharmacist. There may also be a PGY1 pharmacy resident and/or pharmacy student. The BMT pharmacy resident is responsible for identifying and resolving any medication-related issues for all patients on the service. Expectations of the resident will increase from the

first to the second month of rotation. The rotation experience is set up as a two month sequential block. Daily patient care rounds are a required component of this rotation experience. The resident is expected to participate in patient rounds with the fellow, nurse practitioner or attending physician each morning prior to working rounds. Residents are expected to round 6 days a week.

- **Inpatient Gynecology/Oncology (one month)**
  - The resident is expected to provide clinical pharmacy services to all patients on this service. The resident will participate in daily patient care rounds with the GynOnc Service. The GynOnc team consists of an oncology attending physician, 4 gynecological residents, medical students, a pharmacist, and a pharmacy resident. The GynOnc service is primarily comprised of patients with various gynecological malignancies including, but not limited to, ovarian cancer, cervical cancer, and endometrial cancer. The oncology pharmacy resident is responsible for identifying and resolving any medication-related issues for these patients. Daily patient care rounds are a required component of this rotation experience. The resident is expected to check with the GynOnc resident(s) to determine the time of daily rounds for the following day. Residents are expected to round 6 days a week. The resident may be scheduled for GynOnc at any month throughout the year.
  
- **Ambulatory Care (two months)**
  - Ambulatory care rotation is a two-month required learning experience for the PGY-2 oncology pharmacy resident. The practice area is located in the across various supportive care, solid and hematologic malignancy clinics located on the 2<sup>nd</sup> and 3<sup>rd</sup> floor of Brown Cancer Center. The resident in clinic works in collaboration with the physicians, nurse clinicians, disease coordinators, and research coordinators in dosing, therapy choices, supportive care measures, oral chemotherapy, and acting as an educator/liaison between infusion nursing, pharmacy, and the medical oncology team both on a patient case-by-case basis and when new standards of care for specific diseases or medications emerge. The pharmacy resident, under coaching and facilitation of the preceptor, will learn the role of a specialty pharmacist and provide care for outpatient oncology patients. The resident attends clinic four days per week. This rotation is scheduled in the latter six months of the residency year.
  
- **Pharmacy Informatics (1 month)**
  - The resident will participate in clinical and pharmacy-related teams that design, implement and maintain electronic systems in the hospital. Focused educational experiences will include, but are not limited to, project management, database and application management, clinical documentation and decision support, infrastructure and interfacing.
  
- **Ambulatory Care – Bone Marrow Transplant / Hematologic Disorders (one month)**
  - The ambulatory care elective rotation in hematologic disorders / transplant specifically focuses on the treatment of patients with multiple myeloma,

lymphomas, leukemia, non-malignant hematologic disorders and hematopoietic stem cell transplant. The specialty pharmacist in these clinic areas work in collaboration with the physicians, nurse clinicians, pharmacists (BCC satellite pharmacist, community pharmacist, inpatient pharmacists), medication access coordinators, and research coordinators in dosing, therapy choices, supportive care measures, chemotherapy, and acting as an educator/liaison between infusion nursing, pharmacy, and the inpatient Bone Marrow Transplant team. The resident will perform the same duties as the clinical pharmacy specialist and may serve as a preceptor to pharmacy students if on rotation concurrently. The resident is expected to attend clinic 4 days week.

### **Longitudinal Rotations:** (Throughout the year)

- **Ambulatory Care**

- Longitudinal ambulatory care rotation is a ten-month required learning experience for the PGY-2 oncology pharmacy resident. The practice area is located in the breast clinic for approximately four months and the other six months is split equally between lung clinic and gastrointestinal malignancy clinic. These clinics are located on the 2<sup>nd</sup> and 3<sup>rd</sup> floor of Brown Cancer Center. The specialty pharmacist in these clinics works in collaboration with the physicians, nurse clinicians, disease coordinators, and research coordinators. The pharmacist provides clinical support in decision making for drug dosing, therapy choices, supportive care measures, oral antineoplastic medications, and acts as an educator/liaison between infusion nursing, pharmacy, and the medical oncology team both on a patient case-by-case basis and when new standards of care for specific diseases or medications emerge. The pharmacy resident, under coaching and facilitation of the preceptor, will learn the role of a specialty pharmacist and provide care for outpatient oncology patients. The resident attends breast clinic one day of week for 4 months, gastrointestinal clinic and lung clinic each for 3 months throughout the residency year.

- **Service**

- Distributive: Resident(s) will learn to effectively staff the oncology satellite outpatient pharmacy. Responsibilities include preparing and dispensing oncology drugs and ancillary supportive medications according to facility requirements. The resident pharmacist will work in collaboration with the pharmacy technicians, nurses, physicians, and research coordinators in reviewing labs, documenting chemotherapy dispensed, preparing chemotherapy, and supervising the technicians. Additional duties will include providing drug information, assisting with managing adverse drug reactions in the infusion clinic, checking orders for accuracy, and other duties as the opportunity arises. Additionally, the resident will provide clinical documentation of pharmacy services and provide decentralized order entry (while on inpatient rounding rotations) to ensure safe and appropriate medication therapy for patients. The resident is expected to work a total of 26, 8-hour distributive shifts in the oncology pharmacy satellite throughout the residency year.

- Administrative: Continuous participation in staff planning activities, learn process of developing oncology pharmacy budget, exposure to various management strategies, develop skills to create a new service within the organization, develop leadership skills and participate in other opportunities that require resident to interact with various departmental administrative teams.
- **Research**
  - Resident(s) will complete a yearlong residency research project, submit the project proposal to the project primary preceptor and residency director, obtain approval from the hospital Institutional Review Board (IRB), participate in Microsoft Access training (if needed), prepare a poster for presentation at ASHP MCM or HOPA, prepare a final manuscript and submit manuscript for publication prior to residency completion. The resident will be allotted ~ 10 project days which can be used for research and drug information projects. These days will take place throughout the year with the majority occurring during orientation, core month rotations, and the month of December. Additionally, the resident will work with Pharmacy Investigational Drug Services and be involved with a newly starting or ongoing research protocol, including but not limited to, creating the study binder, attending site visits from the sponsor, attending the CSRC (clinical science research committee) for study review and creating the study prescriber order template. Throughout the residency year, the resident will continue to work longitudinally toward accomplishing their research goals.
- **Drug Information**
  - Resident(s) will complete a quality improvement or medication use evaluation project. This project and its details will be presented to leadership upon completion typically during the second half of the year. If applicable the resident(s) will submit this project for publication. The resident will also review, revise, or create at least one oncology pharmacy policies as well as research, prepare, and present at least one drug monographs to the Oncology P & T subcommittee and University of Louisville Hospital P & T committee. The resident(s) will coordinate at least one public health community service project during the year.
- **Teaching & Learning**
  - Resident(s) assist with teaching/precepting of Pharm.D. students during core rotations and student case conferences. Residents participate in the Scholarship of Teaching and Learning Certificate (STLC) Program in conjunction with Sullivan University, College of Pharmacy. Additional activities include: providing lectures for Sullivan University College of Pharmacy pharmacotherapy series, leading small group discussions/sessions, and presenting CE lectures at Sullivan University College of Pharmacy Grand rounds and to the University of Louisville Health Care pharmacy department (required for PGY2 oncology residents that have not obtained STLC prior to PGY2 residency).

## **Elective Rotations:**

- **Palliative Care (one month)**
  - The palliative medicine interdisciplinary team consists of the attending physician, oncology pharmacy resident, nurse practitioner, chaplain, psychologist, and other learners. The oncology pharmacy resident is expected to provide clinical pharmacy recommendations for consult patients. The resident will participate in daily patient care rounds with the palliative medicine team and is responsible for identifying and resolving any medication-related issues. The resident is expected to act as a liaison and communicate recommendations and interventions to the clinical pharmacist of the patient's primary team. The patient population treated by the palliative medicine service includes patients with solid tumors, hematologic malignancies, hematopoietic stem cell transplantation (HSCT) recipients as well as non-hematologic/oncologic conditions. The resident is expected to round 5 days a week.
  
- **Infectious Diseases (one month)**
  - Participates in daily rounds with the Infectious Diseases consult service that provides consultative services to patients within the entire hospital system, actively monitor antibiotic use for drug appropriateness, dosing, duration, route, monitoring and efficacy, communicate ongoing patient information/labs to team on a daily basis, extensive pharmacokinetic drug monitoring, pharmacodynamic dosing adjustments, clinical intervention documentation, vaccine screening, and patient/physician medication-related education as needed. The resident is expected to round 5 days a week.
  
- **Pediatric Oncology (one month)**
  - The practice area is located at Norton Children's Hospital. The resident is expected to provide clinical pharmacy services to all patients on the pediatric oncology service. The resident will participate in daily patient care rounds with the pediatric oncology team and is responsible for identifying and resolving any medication-related issues. The pediatric oncology multidisciplinary team consists of a pediatric oncology attending physician, nurse practitioners, medical resident(s), pediatric oncology pharmacist, oncology pharmacy resident and medical and/or pharmacy student(s). The patient population treated by the pediatric oncology service includes pediatric hematologic disorders, pediatric malignancies and hematopoietic stem cell transplantation (HSCT) recipients. Malignancy types most commonly cared for by the service include acute leukemia, lymphoma, sarcoma, and neuroblastoma and non-malignant blood disorders (hemophilia, aplastic anemia, sickle cell anemia, and ITP). The resident is expected to round 6 days a week.
  
- **Geriatrics (one month)**
  - The geriatrics elective is a dedicated month of experience where the resident works with a multidisciplinary health care team in a variety of practice settings, including an ambulatory geriatric clinic, inpatient service and long term care. The goal of the rotation is to educate the resident on the care of the elderly and the

pharmacist's role in optimizing therapy to decrease medication related adverse events. The resident actively participates in patient care rounds and is expected to perform the same duties as the geriatric pharmacy specialist.

- **Multimodality (one month)**

- This multimodality elective rotation is a dedicated month of experience where the resident will collaborate with various healthcare teams to experience the oncology patients overall treatment plan. The healthcare teams include but not limited to radiation oncology, palliative care, surgery oncology, colorectal surgery, rehabilitation medicine, and interventional radiology. They will attend outpatient clinics and operating rooms as dictated by the discipline. While on palliative care, the resident will attend daily rounds and develop evidence based treatment plan with the team.

- **Clinical Infusion (one month)**

- Infusion- clinical elective rotation is a 1 month learning experience. The clinical infusion pharmacist will be a hybrid position with both clinical and staffing responsibilities. The pharmacist will work in collaboration with the staffing pharmacist, pharmacy technicians, nurses, physicians, and research coordinators in reviewing labs, processing orders, and documenting chemotherapy dispensed. The pharmacist will also work in collaboration with physicians, nurse clinicians, ambulatory care clinical pharmacists, medication access coordinators, and research coordinators to ensure accurate chemotherapy dosing, and supportive care measures. The pharmacist will serve as an educational liaison for both patient and nurses in the infusion center.

- **Academia (one month)**

- The Academic rotation is a 1-month elective rotation at Sullivan University College of Pharmacy (SUCOP). SUCOP is a 3-year, accelerated Doctor of Pharmacy program that educates approximately 300 students on an annual basis through both the didactic and experiential curricula. Pharmacy residents will perform didactic teaching in both large and small group settings, as well as precept students on academic APPE rotations. In addition to teaching, residents will gain experience in the areas of service, scholarly activity, and leadership.

- **HIV (one month)**

- This rotation is a 1 month elective rotation. The trainee on rotation is part of a multidisciplinary health care team providing care to HIV-infected patients in the 550 clinic. They will work in collaboration with infectious disease physicians, nurse practitioners, physician assistants, pharmacists, social workers, and other clinic staff to provide comprehensive medical care and social services. Most of the trainee's time will be spent learning HIV pharmacotherapy and related topics, providing adherence and medication counseling to patients, documenting patient interactions in the medical record, and answering drug information requests from other healthcare providers. The trainee will be involved in direct patient care

activities and interpersonal communications with healthcare providers to learn and refine skills pertinent to the management of HIV-infected patients.

**Scheduling of Rotations During Residency Year:**

- The oncology pharmacy practice residency is a 12-month program. Currently, eleven months are dedicated to core rotations and one is available as an elective rotation.
- July and December are typically dedicated to orientation, research and service components of the residency.
- During a chosen month from August – October, the first month of MO is expected to be completed. The second month is required to be completed in the second half of the residency year during January - June.
- Bone Marrow Transplant is expected to be completed as a two-month sequential experience prior to January of the residency year.
- Electives are scheduled throughout the year based on availability of the rotation.