I. Roster of Attending Physicians:
   - Sunil Abhyankar
   - Ajoy Dias
   - Neil Dunavin
   - Siddhartha Ganguly
   - Tara Lin
   - Brian McClune
   - Joseph McGuirk
   - Leyla Shune
   - Anurag Singh

II. Location of educational experience:
   University of Kansas Medical Center
   Division of Hematologic Malignancies & Cellular Therapeutics
   Bone Marrow Transplant Program

III. Education and Training Goals
   a) Fellows will have the opportunity to see and take care of patients undergoing blood and bone marrow stem cell transplantation (BMT) and Cellular Therapeutics. These will include patients with:
      1. Hematological cancers like leukemias, lymphomas and myeloma
      2. Solid tumors like breast cancer, renal cell cancer, etc.
      3. Nonmalignant hematological disorders like aplastic anemia and hemoglobinopathies.
   b) Indications, contraindications and workup for BMT.
   c) Administration of high doses of chemotherapy and management of its toxicity.
   d) Diagnosis and management of opportunistic infections in immunosuppressed patients.
   e) Supportive care of very sick patients i.e. blood product support, antiemetics, nutrition, pain relief, and fluid and electrolyte management.
   f) Fellows will develop understanding of clinical research methods.
   g) Fellows will do outpatient services where they will learn about pre and post transplant patient and donor care. They will also learn about outpatient transplantation techniques.
   h) Fellows will learn cell pheresis techniques, cell processing and administration.
   i) Fellows will also learn regulatory guidelines regarding FACT accreditation, NMDP donor program set-up, ASBMT and IBMTR guidelines and Immune Effector Cell Therapy accreditation guidelines.
   j) Fellows will be actively learning principles and practice of cellular therapeutics and use engineered cell products and its applications in treating hematological malignancies.
   k) Fellows will be encouraged to acquire basic research training/experience in the field of cellular therapeutics.

IV. Setting for clinical experience
a) The fellows will have primary care responsibilities on the inpatient unit at the University of Kansas Medical Center and Hospital (University of Kansas Health System).
b) Outpatient clinic is located at the Westwood campus of the Cancer Center
c) Stem cell harvest and cell processing with photopheresis unit is located in the laboratory area of University of Kansas Medical Center and Hospital

V. **Methods of teaching**
a) Attending Rounds: daily rounds with bedside teaching when on in-patient services.
b) Conferences: several conferences are available for the fellow to attend including
   1. Weekly inpatient and outpatient transplant meeting: where all the inpatients and outpatients on waiting list are discussed with the entire departmental faculty and other members of the multidisciplinary team attending.
   2. Weekly hematology journal club and case conference meeting: where current departmental research is presented as well as guest lecturers are invited for a talk.
   3. Didactic lecture series and journal club for heme-onc fellows and residents as mentioned above.
   4. QA reporting
c) Miscellaneous: The attending physician reviews and reports with the fellow and pathology studies including bone marrow and blood smears.

VI. **Levels of responsibilities and supervision**
a) The inpatient team will consist of a BMT staff attending (the attendings rotate in 2-week blocks), one fellow, one to two nurse practitioners, a Pharm. D., transplant coordinators, and often social workers and dietitians when deemed necessary. The fellow will have primary responsibility for patient care. He/she will be supervised at all times by a staff attending and attending will be readily available at all time for backup support.
b) Outpatient and cancer treatment and observation unit patients may be seen by fellow time permitting, under supervision of the primary attending.
c) The fellow will learn to oversee a complex transplant and cell therapy team and service under the direct supervision of the attending physician’s direct supervision. The fellow will be expected to know the specific pertinent history, current treatment regimen, associated indications, risks, benefits and alternatives. Additionally, the fellow will present the patient roster of IPs at pertinent BMT/Cell therapy meetings, with attending physician oversight.
d) The fellow will become familiarized with active BMT/Cell therapy clinical research trials and is expected to review the clinical protocols that patients may be eligible for or are currently being treated on.
e) The fellow will understand the meaning of informed consent and apply those principles, under the supervision of an attending physician, when applicable.
f) The rotations in pheresis, Cell processing, HLA at MTN, etc, will be formalized and scheduled.
g) When on in-patient service, fellow will be expected to carry BMT call pager and will be responsible for outpatient and inpatient calls including patients on the cellular Therapeutics service. An attending will always be available as the support for the fellow.
h) Work hour regulations will be per GME and General Heme Onc Fellowship program guidelines and the fellow will be responsible for maintaining the work hours and be mindful of not exceeding those restrictions and requirements

VII. **Opportunities to perform procedures**
a) Bone marrow aspiration and biopsy is the commonest procedure done on this service and the fellow will have ample opportunity to become proficient in doing this.
b) The fellow may also assist in bone marrow harvests under the supervision of the attending.
c) The fellow under supervision of attending physician will reinfuse bone marrow and stem cells for transplant.

d) Skin biopsy is another procedure frequently done for the diagnosis of graft versus host disease and the fellow will get the opportunity to become proficient in doing this.

e) Lumbar puncture and intrathecal chemotherapy instillation, thoracentesis and paracentesis are occasionally indicated.

f) In addition, fellows should become familiar with interpretation of peripheral blood smear, bone marrows, HLA studies and tissue matching.

g) A scheduled program will enable the fellow to spend time in the apheresis unit, HLA lab, and bone marrow processing lab, cellular therapeutics lab and GMP facilities where they will learn about the laboratory aspects of Transplantation and Cellular Therapeutics.

VIII. Educational Aids

a) Fellows are encouraged to read BMT sections of the common Hematology textbooks and landmark articles and national guidelines on different BMT/TCT topics.

b) Fellows will be expected to do presentations on BMT topics at the departmental conferences.

c) A national presentation, poster or oral and a first authored original research project are by completion of the year.

d) Biostatistics course

IX. Mechanisms of evaluation

a) The staff attending with whom they have daily contact during their rotation will evaluate fellows. The standard Fellow evaluation form is used for this purpose.

b) In addition, fellows will evaluate their experience and offer a critique of their staff attending which they submit to the office of program director, division of hematology/oncology in a standardized form.

c) The fellow’s training will be documented per the attached Training Documentation Log of the TCT Program (Attached).