PROJECT TITLE (200 Characters max): Predicting short-term complication risk in patients treated with radical resection of musculoskeletal disease

HYPOTHESIS:
Patients with primary or metastatic bone disease may be managed surgically with wide resection. Past studies have demonstrated that wide resection with or without reconstruction is associated with considerable risk of complications. While these risks are inherent to the procedure and discussed preoperatively with patients, we hypothesize that certain additional patient characteristics, including diabetes and obesity may be associated with additional risk of complications.

PROJECT DESCRIPTION (Include design, methodology, data collection, techniques, data analysis to be employed and evaluation and interpretation methodology)

The State Inpatient Database (SID), a part of the Healthcare Cost and Utilization Project of the Agency for Healthcare Research and Quality, includes short-term readmission data for patients throughout the United States. Data collection will be performed during the months of June and July 2017. Demographic information to be collected includes age, sex, race/ethnicity, income quartile, hospital length of stay (LOS), discharge location, primary payer, readmission status, and the total charges of the initial procedure and the readmission. Clinicopathologic factors include: anemia, chronic pulmonary disease, coagulopathy, congestive heart failure, diabetes, fluid and electrolyte disorder, hypertension, liver disease, obesity, renal failure, and rheumatoid arthritis, and diagnosis upon readmission. Data analysis will be performed utilizing statistical programs SAS and SPSS.

Interested applicants should have a background in statistical analysis utilizing SAS and SPSS.

SPONSOR'S MOST RECENT PUBLICATIONS RELEVANT TO THIS RESEARCH:

Summer Student Research Program
Project Description


IS THIS PROJECT SUPPORTED BY EXTRAMURAL FUNDS?
Yes ☐ or No ☒
(IF YES, PLEASE SUPPLY THE GRANTING AGENCY’S NAME)

THIS PROJECT IS: ☒Clinical ☐Laboratory ☐Behavioral ☐Other

THIS PROJECT IS CANCER-RELATED ☒
Please explain Cancer relevance
This study will add to the literature in evaluating various risk factors which may alter complication risk in patients treated with radical resection of bone and soft-tissue tumors, thus providing surgeons with more information to support clinical decision making.

THIS PROJECT IS HEART, LUNG & BLOOD- RELATED ☐
Please explain Heart, Lung, Blood relevance

THIS PROJECT EMPLOYS RADIOISOTOPES ☐

THIS PROJECT INVOLVES THE USE OF ANIMALS ☐
Pending ☐ Approved ☒ IACUC PROTOCOL #

THIS PROJECT INVOLVES THE USE OF HUMAN SUBJECTS ☐
Pending ☐ Approved ☒ IRB PROTOCOL # M

THIS PROJECT IS SUITABLE FOR:
UNDERGRADUATE STUDENTS ☐ ENTERING FRESHMAN ☐
SOPHMORES ☐ 1st & 2nd Year Medical Students ☒

THIS PROJECT IS WORK-STUDY: Yes ☐ or No ☒

THIS PROJECT WILL BE POSTED DURING ACADEMIC YEAR
FOR INTERESTED VOLUNTEERS: Yes ☐ or No ☒

WHAT WILL THE STUDENT LEARN FROM THIS EXPERIENCE?
The student will gain insight into orthopaedic oncology, including mentorship in performing a detailed analysis of both the current literature and data extracted from the HCUP databases, as well as the development of a manuscript in clinical research.