Comprehensive Research Experience for Medical Students
Summer Research Program 2020

Supervisor/Project Information Form

Due February 6, 2020 by email to crems.programs@utoronto.ca

Supervisor Name: Lilian T. Gien, MD, MSc, FRCSC

Project Title: Accuracy of Intraoperative Frozen Section of Sentinel Lymph Nodes in Invasive Squamous Cell Carcinomas of the Vulva

Hospital/Research Institution: Sunnybrook Health Sciences Centre

Email: lilian.gien@sunnybrook.ca

Field of Research (2 keywords): sentinel nodes, vulvar cancer

Department: Obstetrics & Gynecology

School of Graduate Studies Appointment (IMS, LMP, IHPME etc)? Yes/No: YES
If YES, please name: IHPME

Brief Project Description (<300 words):

Background & Objectives:

Evaluation for groin node metastasis in invasive vulvar cancer has evolved. Sentinel lymph node (SLN) procedures in vulvar cancer are now considered the standard of care, as opposed to a complete groin node dissection (GND) to evaluate for metastatic disease. However, controversy remains regarding the intraoperative assessment of the SLN. A frozen section helps the surgeon decide intraoperatively to either a) complete a full GND if there is metastatic disease present, or b) omit the GND if there is no evidence of metastatic disease. The benefit of the frozen section is avoiding a second surgery if there is a positive SLN. However in a large prospective study (GROINSS), the sensitivity of the frozen section is quoted

to be 48%, and negative predictive value 78%. Additionally, there is concern that frozen section will then cause tissue destruction such that accurate evaluation of the SLN by ultrastaging will not be sufficient.

Our centre is an early adopter of the SLN procedure. Our standard practice is to evaluate the SLN with frozen section intraoperatively, given our early data demonstrating a low false negative rate. Since 2008 we have not done a confirmatory GND at the time of SLN procedure. Our proposed study is to evaluate the accuracy of frozen section in vulvar cancer in an updated cohort, and determine whether discrepancies in intraoperative assessment vs final pathology have impacted patient management.

Methods:

This will be a retrospective observational cohort study of all patients who underwent a SLN procedure for vulvar cancer between January 1, 2008 and January 31, 2020 at our institution. We will perform a search of pathology specimens containing a SLN and a vulvar excision through the institutional pathology database. Data collection will include patient age, comorbidities, clinical presentation, pathologic factors, location of SLN identified, frozen section results, final pathology. Data on further surgery and adjuvant treatment, along with recurrences and deaths will be collected.

Outcomes:

The primary outcome will be to determine the accuracy of the SLN frozen section compared to SLN final pathology. We will determine what proportion of patients had a change in their management as a result of this discrepancy. Furthermore we will determine whether discrepancies in frozen section to final pathology impact groin recurrence rates or overall survival. Currently there is very little data published such that guidelines cannot make recommendations regarding the use of intraoperative frozen section for SLNs in vulvar cancer. This data will contribute to the literature which could then be incorporated into guidelines for SLNs in vulvar cancer.