Assessment of the Diagnostic Accuracy of Core Needle Biopsies in the Diagnosis of Lymphoma

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Assessment of the Diagnostic Accuracy of Core Needle Biopsies in the Diagnosis of Lymphoma

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(*) indicates primary project advisor
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• Excisional biopsy is the gold standard in diagnosis of suspected lymphomas
• Core Needle Biopsy (CNB) offers an alternative
  – Less expensive
  – Non-invasive
  – Fewer procedural risks
• We want to evaluate the accuracy of CNB at TJUH to provide guidance for initial workup of suspected lymphoma
Research Question

– What is the diagnostic accuracy of excisional and core needle biopsies at Thomas Jefferson University Hospital?

Hypothesis

– We expect CNB will be similar in diagnostic ability to excisional biopsy in the diagnosis of lymphomas.
• Medical chart review of all suspected new diagnosis of lymphomas at Thomas Jefferson University
• January 1st, 2016 to December 31st, 2019
• All CNB and Excisional biopsies in these patients will be reviewed
  – Cases from outside hospitals referred to Jefferson were excluded

• Type of biopsy
  – Site
  – Additional CNB or excisional biopsies, if applicable
  – Final pathologic diagnosis
  – Ancillary studies used (immunohistochemistry, FISH, etc)

• Data obtained from Thomas Jefferson University pathology labs
• Adequacy and diagnostic odds ratio will be calculated for CNB and excisional biopsies
Approach and Results

- 457 cases reviewed; 339 excisional and 118 CNB
  - Excisional biopsy was adequate 97% of the time, while CNB was adequate 58%
  - CNB found to have a diagnostic odds ratio of 0.03583
- Inadequate CNB samples were found regardless of needle size
- Most common CNB sites (axillary, inguinal, supraclavicular) are easily accessible for excision
Conclusions

• Excisional biopsy should remain standard of care for initial diagnosis of lymphoma
• Use of CNB has been increasing at Jefferson from 19% in 2016 to 31.6% in 2018
  – 27.7% in 2019
• We would like to find a way to reduce these numbers
Future Directions

• A QI project is underway

• Goals:
  – Understand the reasons for ordering CNB or excisional biopsy
  – Educate the key providers involved

• Variables being considered:
  – Was surgery involved? Oncology?
  – Inpatient vs Outpatient
  – Suspected diagnosis prior to biopsy
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