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

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Needle Biopsies in the Diagnosis of Lymphoma

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Introduction & Objectives

- Excisional biopsy is the <u>gold standard</u> 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

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Objectives & Hypothesis

- 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.

Approach & Results

- 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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