Audit Title:

Follow-up of CT-guided Lung Biopsy Complications Rates & Insufficient Cells for Pathology After the Introduction of 1 cm Lesion Size Cut-off and Implementation of Both Mandatory Core Biopsies and FNA. (Completed Audit Cycle)

Problem:

High rate of 'insufficient cells or non-diagnostic sample' as reported by pathology.

Implementation of recommendations:

1) Mandatory core biopsies AND fine needle aspirations
2) Minimum 1cm size cut-off for CT lung biopsies

Standard:

1) Diagnostic Adequacy: Insufficient Sampling <10%
2) Complications: Pneumothorax (simple) <20%, pneumothorax (complicated) <5%, pulmonary hemorrhage <5%, hemoptysis <5%.

Methodology:

Audit data pre- and post- implementation of recommendations. Our institution used an arbitrary 6 months time frame each time. Data to be collected for CT-guided lung biopsies:

- Size of CT-guided lung biopsy lesion (i.e. >1 cm)
- Were both core biopsies & FNA performed?
- Post-procedure complications (pneumothorax, pulmonary hemorrhage, hemoptysis)
- Review final pathology report for diagnostic adequacy

Results:

Compare pre- and post- recommendation implementation data and implement an action plan based on data. Did diagnostic adequacy improve? Did post-procedure complication rates change?

References:

1. Manhire A, Charig M, Clelland C et al. Guidelines for Radiologically Guided Lung Biopsy. British Thoracic Society Guidelines. Thorax 2003; 58: 920 – 936.
2. CT-Guided Core Biopsy of Lung Lesions: A Primer. AJR. 2009;193 (5): 1228-1235.
3. Ray CE, English B, Funaki BS et-al. ACR appropriateness criteria® radiologic management of thoracic nodules and masses. J Am Coll Radiol. 2012;9 (1): 13-9.