Publicly Transparent Outcome Data for CT Guided Lung Biopsy; a Patient Centered Approach

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CT-guided lung biopsies are increasingly utilized to provide definite diagnosis of lung pathologies.

Reported pneumothorax rates range widely within the literature:
- 20-25% for all pneumothoraxes\(^1\)
- 4-8% for pneumothorax requiring chest tube and subsequent admission\(^2-4\)

Patients are often unsure of their true complication risk and potential for overnight admission.
Benefits of Publicly Transparent Outcome Data

- Reduce Patient Anxiety
- Facilitate Informed Decision Making
- Improve Patient Safety
- Decrease Healthcare Costs
Provide easily accessible, patient centered information regarding our center’s pneumothorax rates following CT guided lung biopsy
Our Strategy for Reporting Outcome Data

1. Analyze Data
2. Design Patient Friendly Infographic
3. Make Data Publicly Available
Approach

• Retrospective Review of CT Guided Lung Biopsies (November 2017-October 2018)
  – Pneumothoraxes on post-procedural radiograph
  – Pneumothoraxes requiring chest tube and subsequent admission
### Results

**Retrospective Review of CT Guided Lung Biopsies (November 2017-October 2018)**

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Procedures</td>
<td>267</td>
</tr>
<tr>
<td>Procedures with Pneumothorax</td>
<td>57 (21%)</td>
</tr>
<tr>
<td>Procedures with Pneumothorax Requiring Admission</td>
<td>18 (7%)</td>
</tr>
</tbody>
</table>
PNEUMOTHORAX RATE

National reported ranges are referenced from several recent review articles regarding complication rates in CT guided lung biopsies. Our institution’s reported rates were calculated by internal review of our procedures.

LEARN MORE

Total Number of CT-Guided Lung Biopsies in the Last Year 267

Pneumothorax Rate

- Our Rate 21.3%
- Nationally Reported Range 20 - 25%
- Major Referral Center A 24%
- We are within the nationally reported average range for pneumothorax
- We are performing better than other major referral centers

Pneumothorax Requiring Chest Tube

- Our Rate 0.9%
- Nationally Reported Range 4 - 8%
- Major Referral Center A 11%
- We are within the nationally reported average range for pneumothorax requiring chest tube
- We are performing better than other major referral centers

As a major referral center, we also have a lot of experience dealing with more challenging biopsies (i.e. more likely to get pneumothoraces). Some of these factors include smaller nodules or if you have severe emphysema. The only way to understand your personal risk is to discuss with your radiologist.

CONTACT US 123.456.7890
Nationally Reported Ranges and Major Referral Center Rates were obtained from published data in the literature\textsuperscript{1-6}
What's Next?

• Make data publicly available
  – Post infographic on our UVA Radiology Website and on “Inside View”, our patient centered blog.
• Post data from other procedures such as:
  – Thyroid FNA (Diagnostic Yield)
  – Liver Biopsy (Complications and Diagnostic Yield)

https://blog.radiology.virginia.edu/
Conclusion

Consumerism has increasingly prompted patients to seek health adjusted outcome data to make better informed healthcare decisions, but such data are rarely, if ever, available for radiologic procedures.

In order to address this void, our department is making outcome data publicly available on our website.

We hope that this effort will spark a movement in radiology where other departments will publicly report their own outcome data.


Thank You!

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