Lung NET diagnostic checklist

Many lung NET are asymptomatic or have nonspecific symptoms, which can make them difficult to diagnose. A combination of imaging techniques, immunohistochemical (IHC) biomarkers, and proliferation markers can aid in obtaining a timely, accurate diagnosis.\(^1,2\)

The following tests may be useful in identifying and classifying lung NET:

1. **DETECTING THE TUMOR\(^1,3\)**
   - ✔ Imaging
     - Chest and abdominal CT
     - MRI
     - PET
   - ✔ Bronchoscopy

2. **DIAGNOSING NET**
   - ✔ IHC biomarkers\(^1,2\)
     - Synaptophysin
     - Chromogranin A
     - Cluster of differentiation 56
     - Thyroid transcription factor-1
     - Cytokeratins
     - Neuron-specific enolase
   - ✔ Proliferation markers and necrosis\(^1,2\)

<table>
<thead>
<tr>
<th>Mitotic Rate and Presence of Necrosis</th>
<th>Ki-67</th>
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</thead>
<tbody>
<tr>
<td>Grade 1: &lt;2 mitoses/10 HPF and no necrosis</td>
<td>&lt;2% Ki-67 index</td>
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<tr>
<td>Grade 2: 2-10 mitoses/10 HPF and focal punctate necrosis</td>
<td>2-20% Ki-67 index</td>
</tr>
<tr>
<td>Grade 3: &gt;10 mitoses/10 HPF and extensive necrosis</td>
<td>&gt;20% Ki-67 index</td>
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</tbody>
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3. **ADDITIONAL STAGING FOR CONFIRMED LUNG NET**
   - ✔ 5-HIAA\(^3,4\)
     - Recommended for patients with metastatic lung carcinoid tumors if carcinoid syndrome is suspected
   - ✔ Octreoscan™ (somatostatin receptor scintigraphy)\(^1\)
   - ✔ Ga 68 dotatate PET\(^1\)

Ensure sufficient tissue for a complete biopsy—incomplete IHC panels may interfere with accurate identification of lung NET subtype\(^2,3\).

Learn more about how diagnosing lung NET early can help lead to appropriate treatment.

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Abbreviations: CT, computed tomography; 5-HIAA, 5-hydroxyindoleacetic acid; HPF, high-power fields; IHC, immunohistochemical; MRI, magnetic resonance imaging; NET, neuroendocrine tumor(s); PET, positron emission tomography.

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