33.9% squamous cell carcinoma, 7.3% large cell carcinoma, 6.1% other. The data is summarised in the table below:

**Conclusion**

- Audit over the past 3 years shown steady improvement in lymph node assessment performance.
- Continuous auditing and presentation of individual surgeon data at local, regional and national forums has contributed to the increasing compliance to the guideline targets.
- There remains scope for further improvement and consultant engagement.
- Re-auditing will be essential to further improve compliance with guidelines.

### Reference

BTS Guideline for diagnostic flexible bronchoscopy in adults. Thorax 2013;68(Suppl 1)

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**P226** WITHDRAWN

### Asthma treatments

#### P227 Efficacy and safety of budesonide–formoterol (BF Spiromax®) in adults and adolescents with asthma: randomised comparison with BF Turbuhaler®

V. Ruda, G. Gopalani, R. Rodriguez-Roisin, Y. Shu. University Hospital Rostock, Rostock, Germany; 2Teva Pharmaceuticals, West Chester, USA; 3Universitat de Barcelona Villarroel, Barcelona, Spain

Background Duospiriva® (Teva Pharmaceuticals) is a dry-powder inhaler designed to deliver budesonide and formoterol fumarate (BF Spiromax®) with maximum ease of use. Pharmacokinetic studies have shown bioequivalence of BF Turbuhaler®. This study compared the efficacy and safety of these devices in patients with asthma.

Methods This was a 12-week, multicentre, double-blind, randomised, controlled trial (N=605). Eligible patients (≥12 years old) had persistent asthma with FEV1 ≥ 65% predicted, had used a SABA and ICS for ≥ 8 weeks before screening and were maintained on stable-dose ICS for 4 weeks. The primary objective was to demonstrate non-inferiority of twice-daily BF Spiromax® 160/4.5mcg to BF Turbuhaler® 200/6mcg, with respect to change from baseline in weekly average of daily trough morning PEF.

Results This analysis was based on the per protocol population (N=290 and N=284 for BF Spiromax® and BF Turbuhaler® groups, respectively). The least squares mean change from baseline to Week 12 in morning PEF was 18.8 L/min with BF Spiromax® and 21.796 L/min with BF Turbuhaler®. Non-inferiority of BF Spiromax® vs BF Turbuhaler® was demonstrated, as the lower limit of the 95% two-sided CI (−9.02 L/min) is greater than −15 L/min. Similarly, no significant between-group differences were observed in secondary efficacy endpoints. Both devices were well tolerated, with no significant differences in the incidence of adverse events or asthma exacerbations.

Conclusions This study has demonstrated the non-inferiority of BF Spiromax® vs BF Turbuhaler® in adults and adolescents with asthma. Further data are required to confirm whether BF Spiromax® can be used as an alternative to BF Turbuhaler® in other indications.

Sponsor: Teva Pharmaceuticals.

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### Table 1

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of bronchi – Suspected LC</th>
<th>No. with confirmed LC</th>
<th>No. of bronchi – definite tumour seen</th>
<th>Biopsy sensitivity (%)</th>
<th>Brushing sensitivity (%)</th>
<th>Washing sensitivity (%)</th>
<th>Overall sensitivity when definite tumour seen (%)</th>
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<td>2010–11</td>
<td>92</td>
<td>72</td>
<td>33</td>
<td>67.7</td>
<td>66.7</td>
<td>43.8</td>
<td>84.4</td>
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<tr>
<td>2011–12</td>
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<td>71</td>
<td>41</td>
<td>80.6</td>
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<td>81</td>
<td>52</td>
<td>81.3</td>
<td>55.8</td>
<td>30.6</td>
<td>86.5</td>
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<tr>
<td>2013–14</td>
<td>87</td>
<td>77</td>
<td>36</td>
<td>80</td>
<td>71.4</td>
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