

## Online Appendix 1: Unit costs for biopsies (2018/19 prices)

Resource	Unit cost (£)	Reference
<b>Endobronchial ultrasound (EBUS)</b>		
Endobronchial ultrasound	728	NHS Reference Costs 2018/19. Day Case. Endobronchial Ultrasound Examination of Mediastinum, DZ70Z.
<b>CT biopsy</b>		
Biopsy	709	NHS Reference Costs 2018/19. Weighted average of Elective Inpatient and Day Case costs for Percutaneous Biopsy of Lesion of Lung or Mediastinum, YD03Z.
CT scan	83	NHS Reference Costs 2018/19. Diagnostic Imaging. Computerised Tomography Scan of One Area, without Contrast, 19 years and over, RD20A.
Total	792	
<b>Biopsy and frozen section only (for patients who do not then have further surgery)</b>		
Theatre time (115 minutes)*	1679	ISD Scotland. Costs Book – Detailed Tables R142X_2019, released 19 November 2019. 2019. Average of theatre running costs (inclusive of staff) divided by theatre hours for thoracic surgery.
Length of stay (3.5 days on a ward)*	1456	NHS Reference Costs 2017/18. Elective Inpatient Excess Bed Day cost for Complex Thoracic Procedures, 19 years and over, with CC Score 0-2, DZ02K, inflated to 2018/19 prices using the NHS Cost Inflation Index (NHSCII).
Pathologist time (15 minutes)†	27	Unit Costs of Health and Social Care 2019. 14. Hospital-based doctors, Consultant: medical, Cost per working hour.
Biomedical scientist time (70 minutes)†	57	Unit Costs of Health and Social Care 2019. 12. Hospital-based scientific and professional staff, Band 6, Cost per working hour.
Handler and 2 staples*	652	Average of the costs for relevant handlers and staples from J&J and Medtronic; NHS Supply Chain catalogue costs provided by the companies for 2018/19.
Total	3871	
<b>Biopsy and frozen section (for patients who have further surgery)</b>		
Theatre time for biopsy (20 minutes)*	292	ISD Scotland. Costs Book – Detailed Tables R142X_2019, released 19 November 2019. 2019. Average of theatre running costs (inclusive of staff) divided by theatre hours for thoracic surgery.
Pathologist time (15 minutes)†	27	Unit Costs of Health and Social Care 2019. 14. Hospital-based doctors, Consultant: medical, Cost per working hour.
Biomedical scientist time (70 minutes)†	57	Unit Costs of Health and Social Care 2019. 12. Hospital-based scientific and professional staff, Band 6, Cost per working hour.
2 staples (handler assigned to surgery costs)*	331	Average of the costs for relevant staples from J&J and Medtronic; NHS Supply Chain catalogue costs provided by the companies for 2018/19.
Total	707	

Resource use estimates from \*VIOLET patients, †expert opinion.

## References

Curtis L, Burns A. Unit Costs of Health and Social Care 2019. Canterbury: Personal Social Services Research Unit, University of Kent; 2019. doi: [10.22024/UniKent/01.02.79286](https://doi.org/10.22024/UniKent/01.02.79286)

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NHS England and NHS Improvement. National Schedule of Reference Costs 2018-19. 2019. Available from: <https://www.england.nhs.uk/costing-in-the-nhs/national-cost-collection/>

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