CHEST

Endobronchial Ultrasound
Clinical Uses and Professional Reimbursements

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Endobronchial ultrasonography (EBUS) has become an invaluable tool in the diagnosis of patients with a variety of thoracic abnormalities. The majority of EBUS procedures are used to diagnose and stage mediastinal and hilar abnormalities, as well as peripheral pulmonary targets, with a probe-based technology. Nearly 1,000 articles have been written about its use and utility. New Current Procedural Terminology (CPT) codes have been introduced in 2016 to better capture the work and clinical use associated with the various types of EBUS procedures. The existing 31620 code has been deleted and replaced by three new codes: 31652, 31653, and 31654. These new codes have been through the valuation process, and the new rule for reimbursement has been active since January 1, 2016 with National Correct Coding Initiative correction as of April 1, 2016. The impact of these new codes will result in a net reduction in professional and technical reimbursement. This article describes the current use of EBUS and explains the current codes and professional reimbursement. CHEST 2016; 150(6):1387-1393

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Endobronchial ultrasonography (EBUS) technology has been a major advancement in pulmonary medicine and broadly expanded the role of bronchoscopy and interventional pulmonology, primarily in the realm of lung cancer. There are currently two different EBUS technologies in clinical practice and a third rarely used technique. The most commonly used by far is the linear convex EBUS bronchoscope designed for directing transbronchial needle aspiration (TBNA) of central hilar and mediastinal structures. This has two basic applications—the diagnosis of abnormal mediastinal or hilar structures and systematic mediastinal interrogation for staging lung cancer. Radial EBUS is a catheter-directed probe used for localizing lung lesions beyond the central airways and is often used as an add-on to peripheral diagnostic techniques or as an adjunct to techniques such as navigational bronchoscopy, ultrathin bronchoscopy, and other guided techniques. The third but rarely used technique is the balloon-probe EBUS catheter that is used for assessment of transmural airway wall structures, typically for ascertainment of tumor invasion of the airway wall structures. The balloon probe was the original technique

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ABBREVIATIONS: AMA RCU = American Medical Association Relative Value Scale Update Committee; AQuIRE = ACCP Quality; CMS = Centers for Medicare Services; CPT = Current Procedural Terminology; EBUS = endobronchial ultrasonography; RVU = relative value units; TBNA = transbronchial needle aspiration

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used to describe and value the 31620 EBUS code: The balloon probe was placed against the endobronchial wall where an adjacent lymph node was suspected and then the position was confirmed. The probe was removed and conventional TBNA was then performed in the general location that the balloon EBUS had confirmed. The advent of the linear EBUS bronchoscope, with its ability to perform real-time visualization of the TBNA needle entering the target, made the balloon probe obsolete for this purpose. This article reviews the basic clinical application of EBUS and the impact of the change in the CPT codes in 2016. Table 1 presents CPT code descriptions.

As of this writing, there are 976 articles about EBUS on PubMed. These describe many aspects of the procedure from clinical utility, novel techniques and unusual disease entities biopsied or managed, initial experiences, comparative effectiveness, and randomized clinical trials. To suggest that this technology has led to a prodigious advancement in the realm of bronchology cannot be understated. A recent article entitled "Endobronchial Ultrasound Changed the World of Lung Cancer Patients: An 11-Year Institutional Experience" is just one example of this evidence.[1]

We have made mention of two distinct clinical uses of linear EBUS. Although there is a potential for overlap between staging and diagnostic EBUS in many cases of lung cancer, it should be recognized that there are very different work times and effort associated with each. There are several articles that describe staging techniques and demonstrate comparisons vs mediastinoscopy, including randomized controlled trials.[2] Table 2 lists several clinical examples of diagnostic EBUS.

Diagnostic EBUS is typically used when formal mediastinal interrogation is not required. This occurs frequently in individuals with malignancies other than lung cancer in which mediastinal lymph nodes demonstrate metastatic spread. Breast cancer, colon cancer, renal cancer, melanoma, and others are well known. Diagnostic EBUS is also used when primary lung cancer is already suspected; additionally, the mediastinal lymph nodes are the easiest and safest for performing a biopsy and provide tissue confirmation

TABLE 1] Selected 2015 and 2016 CPT Codes

2015 Codes	Description	Work RVUs
31622	Bronchoscopy, flexible or rigid, including fluoroscopic guidance, when performed; diagnostic, with cell washing	2.78
31620 Will be deleted	Endobronchial ultrasonography (EBUS) during bronchoscopic diagnostic or therapeutic interventions (list separately in addition to code for primary procedures)	1.40
31629	Bronchoscopy, rigid or flexible, including fluoroscopic guidance, when performed; with transbronchial needle aspiration biopsy of trachea, main stem, or lobar bronchus or bronchi, or a combination	4.09
31633	Bronchoscopy, rigid or flexible, including fluoroscopic guidance, when performed; with transbronchial needle aspiration biopsy, each additional lobe (list separately in addition to code for primary procedure)	1.32
2016 Codes	**Description**	**Work RVUs**
31622	Bronchoscopy, flexible or rigid, including fluoroscopic guidance, when performed; diagnostic, with cell washing	2.78
31629	Bronchoscopy, rigid or flexible, including fluoroscopic guidance, when performed; with transbronchial needle aspiration biopsy, trachea, main stem, or lobar bronchus or bronchi, or a combination	4.00
31652	Bronchoscopy with endobronchial ultrasonography (EBUS)-guided transtracheal or transbronchial (or both) sampling (eg, aspiration)/biopsy), one or two (or both) mediastinal or hilar lymph node stations or structures	4.71
31653	Bronchoscopy with endobronchial ultrasonography (EBUS)-guided transtracheal or transbronchial sampling, or both (eg, aspiration)/biopsy), 3 or more mediastinal or hilar lymph node stations or structures (or both)	5.21
31654	Bronchoscopy with transendoscopic endobronchial ultrasonography (EBUS) during bronchoscopic diagnostic or therapeutic interventions for peripheral lesions (list separately in addition to code for primary procedures)	1.40

CPT = current procedural terminology; RVU = relative value units.