

BROOKE BERTUS, Dept of Pathology, Anatomy, and Laboratory Medicine (PALM), West Virginia University School of Medicine, Morgantown, WV, 26506, MATTHEW J. ZDILLA, Depts of Natural Sciences & Mathematics and Graduate Health Sciences, West Liberty University, West Liberty, WV, 26074 and Dept of Pathology, Anatomy, and Laboratory Medicine (PALM), West Virginia University School of Medicine, Morgantown, WV, 26506, and H. WAYNE LAMBERT, Dept of Pathology, Anatomy, and Laboratory Medicine (PALM), West Virginia University School of Medicine, Morgantown, WV, 26506. Bilateral internal thoracic arteries emerging distal to the anterior scalene muscles: Implications in coronary artery bypass grafting.

The internal thoracic artery (ITA) usually arises from the first-part of the subclavian artery. However, various anatomic origins of this vessel have been reported. In this study, routine cadaveric dissection of a 98-year-old white female who died of congestive heart failure, revealed a bilateral variation of the internal thoracic artery. The ITA, on both the left and right sides, arose at the lateral boundary of the first rib from the terminal portion of the subclavian artery and the initial portion of the axillary artery. Due to its patency, location, and long-term positive clinical outcomes, the internal thoracic artery is routinely used as a conduit for coronary artery bypass grafting surgery (CABGs). With more than 400,000 CABGs being performed in the United States each year, knowledge of this vessel's anatomy is immensely important. Recognition of the presented variant may help to avoid confusion during surgery, prolonged procedure times, and downstream complications. The aim of this study is to describe an ITA anatomic variant and to elucidate its clinical significance.