Commentary: No-fly zone

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PII: S0022-5223(22)01172-2
DOI: https://doi.org/10.1016/j.jtcvs.2022.11.001
Reference: YMTC 18851

To appear in: The Journal of Thoracic and Cardiovascular Surgery

Received Date: 1 November 2022
Accepted Date: 2 November 2022

Please cite this article as: Rocco G, Commentary: No-fly zone, The Journal of Thoracic and Cardiovascular Surgery (2022), doi: https://doi.org/10.1016/j.jtcvs.2022.11.001.

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COI statement: Gaetano Rocco has financial relationships with Scanlan and Medtronic.

Word count: 500/500

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Central message: The location of a Pancoast tumor may be associated with a specific prognostic outlook.

Central picture legend: Gaetano Rocco, MD

Although relatively infrequent, lung tumors invading the thoracic inlet may be associated with distinctive anatomical features that pose a serious surgical and oncological challenge for their management. Enterprising surgeons have previously attempted to define the surgical principles for such tumors, both in terms of the optimal approach and to facilitate the completeness of resection necessary to obtain effective local control.1-3

The conceptual background of the paper from Tsitsias and colleagues4 is the need for a multimodality, aggressive approach to these tumors, which was established by the Intergroup 0160 study.5 However, on the basis of the authors’ experience distinguishing areas in the thoracic inlet,6 they demonstrate here that the prognosis for Pancoast tumors depends on the location of the tumor.4 In particular, anterior Pancoast tumors portend worse outcomes than posterior ones, including a higher proclivity for dissemination. With acknowledgement of the limited number of patients in their series, the authors attempt to identify cancer-related variables underlying this difference in outcomes. The first factor analyzed is the prevalence of R1 resection—19% of patients with anterior Pancoast tumors had R1 resection, which was not statistically different from that for posterior tumors (13%; p=0.4). In this setting, the question may arise of whether the
extent of resection should be determined on the basis of the preinduction tumor extension or the findings from postinduction imaging with intraoperative assessment.

On reflection, the selection of suitable candidates for surgery among patients with Pancoast tumors may be the real issue. In fact, the current study disavows the prognostic role of subclavian artery invasion, which was observed by the group from Hôpital Marie-Lannelongue. If the vascular axis is not it, one is led to wonder what is the anatomical limit to predict an R0 resection for anterior Pancoast tumors. In this context, that 38% of R1 resections were in patients with soft-tissue invasion may prompt more-careful consideration of patient selection criteria.

The second potential factor underlying the survival difference between tumor locations could be N+ status—the rate of N+ status was twice as high for anterior tumors than for posterior tumors (24% vs 11%; \( p=0.2 \)). Of note, the small number of patients in this series may have diminished the ability to detect a statistical difference in N involvement. However, if anything, the prevalence of N1-positive nodes reinforces the need for thorough pretreatment staging, using endobronchial ultrasound, for this subset of patients.

Finally, despite no side predilection, one wonders whether the infiltration of the thoracic duct on the left side plays a role in the higher incidence of distant relapse observed in patients with anterior tumors.

In this study, age was a statistically significant prognosticator. Accordingly, it is reasonable to ask, Should anterior Pancoast tumors in patients aged >60 years be defined as a surgical “no-fly zone” and treated with a multimodality approach that excludes surgery? The answer possibly lies in the remarkable survival advantage among patients with pathologic complete response after chemoimmunotherapy, which was observed in only 36% of patients with Pancoast tumors in the current series.
References


