perhaps a risk model rather than traditional staging is more appropriate.

References

Commentary: Size may matter after all

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Yun and colleagues report a multicenter retrospective cohort study examining tumor size in patients with completely resected thymic epithelial tumors (TETs). They found that tumor size was independently associated with survival in patients with limited-stage tumors, and that tumor size >5.5 cm was associated with worse survival.

This study is a valuable addition to the cornucopia of existing literature about tumor size in TETs, primarily because it represents a methodically rigorous analysis of a complicated question in a heterogeneously patient population. In particular, unlike the vast majority of other studies, the authors considered tumor size as a continuous variable, focusing their main analyses on both identification of a potential threshold tumor size above which survival was worse and on the use of interaction terms to characterize the relationship between tumor size and other prognostic and treatment factors. Using a combination of maximally selected rank statistics and concordance, they demonstrate that in their cohort, tumor size >5.5 cm was associated with worse adjusted survival in patients with limited-stage tumors. They also found that tumor size was not associated with survival in patients with more advanced tumors. Using interaction terms in multivariable regression, they did not find a meaningful relationship between tumor size and survival associated with receipt of adjuvant radiation.

The authors also candidly acknowledge the numerous limitations of their study, ranging from likely selection bias and unmeasured confounding to heterogeneity of...
surgery offered to patients in their cohort, interobserver variation in measurement of tumor size, limited subsets of patients undergoing adjuvant therapies, and the problem of multiple comparisons in use of concordance to evaluate a potential cutoff.

This study raises some important questions about the significance of tumor size in patients with limited TETs: (1) should tumor size be reconsidered in prognostication (ie, staging) in this patient population?; (2) should patients with larger tumors undergo more frequent surveillance or adjuvant therapies? A 2014 study by the International Association for the Study of Lung Cancer/International Thymic Malignancy Interest Group (ITMIG) evaluated the prognostic significance of tumor size in TETs using log-rank test statistics and found that the putative size threshold of 10 cm was not “statistically significant,” with a recursive partitioning analysis demonstrating that tumor size had a minor prognostic role compared with other variables; ultimately, tumor size was not included in staging.2 It is unclear whether that study used multivariable regression and adjustment for interactions, and in light of this current study, future efforts by the ITMIG may seek to analyze this question further to gauge the external validity of the findings. Unfortunately, the current study was also not primarily designed to examine whether tumor size had a relationship with survival associated with receipt of adjuvant therapies. Further studies, perhaps by this same group, may consider investigating this question in greater detail to study the practical implications of their findings.

Yun and colleagues are to be congratulated on this methodologically accomplished study, which generates important hypotheses about the role of tumor size in survival for patients with completely resected TETs.

References