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ASO Author Reflections: The Ability of the AJCC 8th Edition to Predict Risk of Recurrence in Differentiated Thyroid Cancer

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Past:

Differentiated thyroid cancer (DTC) patients require lifelong surveillance secondary to excellent survival after treatment, making recurrence an impactful outcome to measure.¹ The American Joint Commission on Cancer's (AJCC) Tumor, Nodes, Metastasis staging system is universally known but stratifies based on risk of cancer mortality, not recurrence.^{2–4} Other risk stratification systems for DTC exist but are not built into the standard staging system, nor are they in such widespread use. We hoped to define the risk of recurrence by stage using the new AJCC 8th edition.⁵

Present:

In the new AJCC staging system, nearly all patients considered disease free after treatment have stage I or II disease (99% in the study⁵). As a result, the 8th edition is able to better differentiate risk of recurrence between stage I and II patients (3.2% and 15.9% at 10 years, respectively). While the increased risk of recurrence in stage II patients likely reflects the substantial downstaging of patients in the 8th edition, there are important implications for the AJCC staging system. First, because all thyroid cancers are staged, clinicians can broadly estimate risk of recurrence based on the given stage without knowing the more granular, and often unavailable clinicopathological factors. Second, clinicians can tailor their treatment or follow-up to the overall stage knowing that stage according to the AJCC 8th edition correlates with outcomes.

Future:

The AJCC 8th edition has made significant strides in survival prediction and recurrence prediction. However, the search for the ideal prognostic model remains. The 8th edition

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encourages the use of clinicopathological factors in addition to the model itself to aid in recurrence prediction.⁴ Future models will need to include additional relevant clinicopathological factors to complement the stage to accurately predict the risk of recurrence in DTC. The ideal model would tailor treatment and surveillance regimens based on the risk of recurrence at a global level.

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