

DEFINING A VALID AGE CUT OFF IN STAGING OF WELL DIFFERENTIATED THYROID CANCER

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Background/Purpose: Advanced age is a recognized adverse prognostic factor in patients with well-differentiated thyroid cancer. The risk of death from aggressive disease is essentially limited to older patients. The 45 year cut-off was chosen as the median age in datasets, not based on prognostic validity. The aim of this study was to determine a statistically optimized age threshold with robust prognostic validity.

Methods: 1760 patients >18years with WDTC, treated at MSKCC between 1986-2005 were analyzed. Recursive partitioning was used to determine the age threshold most predictive of risk for disease-specific death.

Results: The median age was 46. The median follow up was 73 months.

Recursive partitioning analysis identified determinants of risk of disease-specific death, with M stage the major prognostic determinant, followed by age above 55. Modifying the age threshold in AJCC staging from 45 to 55 migrated 32% of low-risk stage III-IV patients into stages I-II *. The proportion of patients in Stage I increased from 67 to 80%; 5 year DSS remained unchanged (100%). The proportion in Stage IV decreased from 12 to 9%, while 5 year DSS changed from 91-88%.

Discussion & Conclusion: The risk of disease-specific death from WDTC is determined first by M status, then by age over 55. A change in age cutoff from 45 to 55 in the AJCC system would migrate many low risk patients from higher to lower stages, thereby improving the prognostic value of TNM staging.