



**Supplemental Fig. S1.** Geographical variation in the percentage of tracheolaryngeal invasion among well-differentiated thyroid cancer patients. The bar chart depicts the geographical variation in the prevalence of tracheal and laryngeal invasion in thyroid cancer patients across different states in the United States from 2000 to 2015. Each bar represents a specific state, with the height indicating the percentage of patients in that state who experienced tracheolaryngeal invasion at the time of their cancer diagnosis. The number of patients diagnosed in each state during the study period is indicated in parentheses next to the state name.