



Structural recurrence in differentiated thyroid carcinoma: importance of minimal local invasion



Beatriz G. Cavalleiro, Vergilius J. F. de Araújo Filho, Leandro L. de Matos, Claudio R. Cernea, Luiz Paulo Kowalski
São Paulo State Cancer Institute (ICESP), University of São Paulo Medical School (FMUSP), São Paulo, Brazil

Introduction: Minimal local invasion in differentiated thyroid carcinoma (DTC) is considered a minor risk factor for recurrence, but it is not supported by our clinical experience.

Objective: Compare structural recurrence rates with no local invasion (Group 1), minimal invasion (Group 2), or gross invasion (Group 3).

Patients and Methods: The medical charts of 685 patients submitted to total thyroidectomy were retrospectively reviewed (minimal follow-up time: 30 months or the death of the disease. The mean follow-up time was 71.5 months (range 5 to 243 months). The chi-square test was used for comparisons of the frequency of a phenomenon between the groups. The Kaplan-Meier method was used in the survival analyses. The level of statistical significance adopted was below 5% (P-value ≤ 0.05).

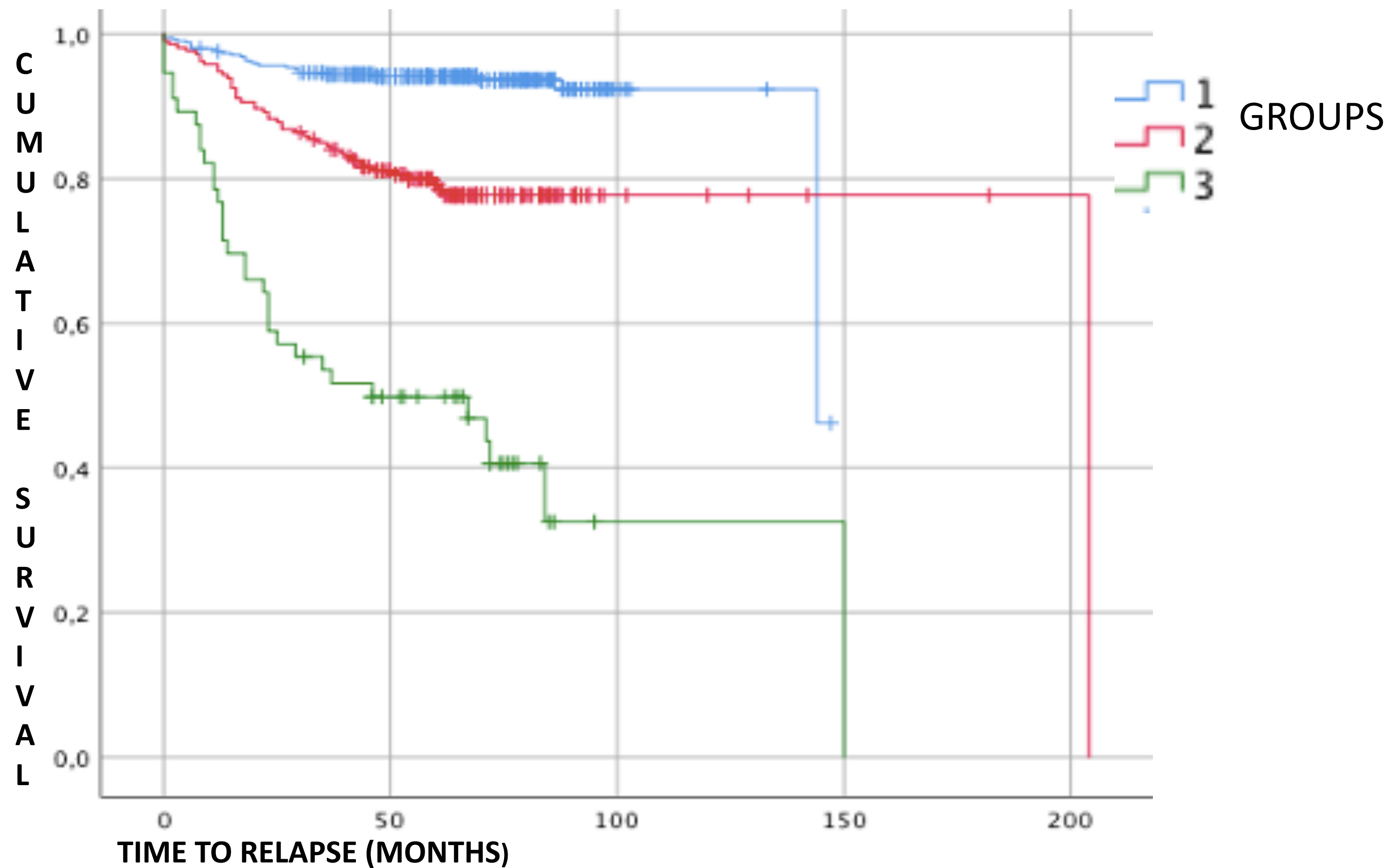
Results: Radioiodine therapy (RAI) was offered to 47.9% of Group 1, 97.8% of Group 2, and 98.2% of Group 3. Proportions of neck reoperations and adjuvant treatment with RAI were similar among patients who developed structural disease. Cumulative structural disease-free survival was determined in 92.4% for Group 1, 77.7% for Group 2, and 32.5% for Group 3 (P<0.001) (Figure). Other correlations are presented in the table.

Discussion: Several studies have validated the use of gross invasion as a predictor of survival in DTC,¹⁻³ while the notion that minimal invasion carries a worse prognosis remains controversial.^{4,5} The ATA initial risk stratification⁶ considers the minimal invasion as an intermediate risk criterium, although AJCC-UICC TNM⁷ removed that aspect from its most recent system. As the present study observed, the minimal invasion has been correlated with other adverse factors and reduced disease-free survival.^{2,4}

Conclusion: Local invasion is an important risk factor for structural relapse and it is possibly being underestimated in the current risk stratification systems and clinical practice.

	NO INVASION		MINIMAL INVASION		GROSS INVASION		P*
	N	%	N	%	N	%	
Age (years old)							
< 45	135	30.2	56	30.8	10	17.9	0.162
45 to < 55	119	26.6	40	22.0	12	21.4	
≥ 55	193	43.2	86	47.2	34	60.7	
Cervical node metastasis**	35	7.8	74	40.7	35	62.5	<0.001
Distant metastasis	11	2.5	6	3.3	12	21.4	<0.001
Angiolymphatic invasion	36	8.1	49	26.9	35	62.5	<0.001
Structural recurrence	25	5.6	33	18.1	18	32.1	<0.001
TOTAL	447	65.3	182	26.6	56	8.2	

** pathological analysis



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