LONG-TERM DISEASE FREE SURVIVAL (DFS) IN PATIENTS WITH SMALL BREAST CANCER: CLINICAL RELEVANCE OF TRADITIONAL AND NEW PROGNOSTIC FACTORS IN A RETROSPECTIVE STUDY


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Aim: The incidence rate of small-size (T1) early-stage breast cancer (EBC) has increased. The risk of relapse is low, but there is a growing interest in identifying traditional and new prognostic factors to optimize therapeutic management. Patients with T1 EBC, especially if node-negative (N0), are excluded from tumor gene expression profiling due to the cost of this procedure. Immunohistochemistry (IHC)-based classification of breast cancer subtypes with confirmed prognostic and therapeutic implication is therefore recommended.

Methods: We reviewed the records of 511 patients diagnosed with T1 EBC referred to our oncology unit for adjuvant therapy. This retrospective study evaluated the different long-term clinical outcomes over 15 years and correlated with traditional (T, N, ER and PgR, Ki-67, HER2) and surrogate molecular subtype classification of the tumors using IHC prognostic factors.

Results: Patient characteristics were: median age 58.5 years (range 27-86). Tumor stage: T1a 74 (14.5%), T1b 120 (23.5%), T1c 317 (62.0%). Node status: N0 327 (64.0%), N1 184 (36.0%). Tumor grade: G1 144 (28.2%), G2 216 (42.3%), G3 151 (29.5%). Ki-67 index: <20% 327 (64.0%), >20% 184 (36.0%). HER2 overexpression: absent 378 (73.9%), present 80 (15.6%). IHC molecular subtype was: Luminal A 199 (38.9%), Luminal B HER2 negative 70 (13.7%), Luminal B HER2 positive 65 (12.7%), HER2 overexpression 14 (2.7%), Basal-like 41 (8.0%). In the overall population, the significant prognostic factors at 5 years were N0 vs. N1 (p = 0.05), PgR <20% vs. PgR >20% (p = 0.03), Ki-67 index <20% vs. Ki-67 >20% (p = 0.04) and Luminal A vs. Luminal B HER2 negative (p = 0.05). At 15 years of follow-up, only Ki-67 index confirmed its prognostic value (p = 0.04). In the N0 subgroup of patients DFS curves were significantly different for Ki-67 index <20% vs. Ki-67 >20% both at 5-year (p = 0.01) and 15-year follow-up (p = 0.03).

Conclusions: The DFS curves of T1 EBC patients at 5 years underline the prognostic relevance of the cut-off of 20%, both for PgR expression and Ki-67 index as well as IHC-based molecular subtypes Luminal A vs. Luminal B HER2 negative. With regard to long-term outcome, only Ki-67 index seems to be useful for identifying different prognostic tumor subgroups. These results were particularly important to improving current management of N0 EBC patients with different risk factors.

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