

Pathological characteristics of very young (≤ 30 years) breast cancer patients: a single-institution experience from Turkey

Breast cancer rarely occurs in young women. Our knowledge about disease presentation, prognosis and treatment effects is largely dependent upon older series. Breast cancer in women < 35 years of age occurs rarely (2%–4% of all breast cancer). Age < 35 is an independent risk factor of recurrence and death [1]. There is little information about very young breast cancer patients (≤ 30 years of age) in the literature. The aim of the study was to compare pathological risk factors of women with breast cancer aged ≤ 30 (very young group) with women with breast cancer aged 31–50 years (young group).

One thousand and thirty-eight consecutive breast cancer patients presenting at Hacettepe University Institute of Oncology between years 2004 and 2007 were evaluated. In all, 422 (40.0%) of the patients were premenopausal and ≤ 50 years; 116 (11.1%) and 44 (4.2%) patients were ≤ 35 and ≤ 30 years of age, respectively. Median ages of the diagnosis in very young and young breast cancer groups were 28 and 41, respectively. In the 'very young' group, when compared with the 'young' breast cancer patients, percentages of tumors classified as estrogen receptor negative (48.5% versus 38.1%, $P = 0.26$), progesterone receptor negative (43.3% versus 39.4%, $P = 0.70$), HER2/neu positive (38.1% versus 22.2%, $P = 0.23$), and grade 3 (52.9% versus 39.4%, $P = 0.14$) tend to be higher although statistically not significant. Triple-negative breast cancers were more frequent in very young groups (30.4% versus 18.6%, $P = 0.21$). There were no statistical differences in extracapsular extension in metastatic axillary nodes, neural invasion, and lymphovascular invasion of tumors between the two age groups. There were also no differences between the two groups for pathological tumor size (T), frequency of positive lymph nodes (N), and distant metastasis at diagnosis (M). In our small cohort study population, we observed that very young patients (≤ 30) tended to have poorer pathological prognostic factors

compared with the young breast cancer patients. In our study population, the percentage of younger breast cancer (≤ 35) (11.1%) is higher compared with the literature [2–5]. Tumors occurring in very young patients are reported to have a particularly aggressive biological behavior leading to a somewhat unfavorable prognosis, which was described extensively in the preadjuvant systemic therapy era [3, 6]. Several reports about age and prognosis as seen in our report conclude that features like higher grade represent a relevant aspect for discriminating between very young and young premenopausal breast cancer patients [1–6]. The results of the present study indicate that very young patients in our institution are having more high grade, triple-negative and HER-2-positive tumors representing poorer prognostic features than young premenopausal breast cancer patients.

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