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Neutrophil-lymphocyte ratio and nodal pathologic complete response in node positive breast cancer patients undergoing neoadjuvant chemotherapy
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Goals: The inflammatory response plays an important role in the development and progression of cancer. Neutrophil-Lymphocyte ratio (NLR) is a biochemical marker of systemic inflammation and it is increasingly gaining appreciation for its prognostic role as outcome predictor. In several solid tumors, a lower NLR was associated with a greater rate of response to chemotherapy in the primary tumor. Aim of the study is to evaluate if NLR is a predictor of nodal pathologic complete response (pN0) in patients with positive lymph-nodes at diagnosis, undergoing neoadjuvant chemotherapy (NACT).

Methods: Women with clinically node-positive breast cancer treated with NACT followed by surgery at the San Raffaele University Hospital (IT) and Ente Ospedaliero Cantonale of Lugano (CH) were included in the analysis. Univariable and multivariable logistic regression analyses were performed to evaluate the independent predictors of nodal complete response at the final pathology after NACT among age, NLR prior to NACT, BMI, tumor size, histology, grading, ki67, ER and PgR status, HER 2-expression, and TNBC subtype.

Results: A total of 201 women were included. The axillary pathologic complete response rate was 52.2% (105/201). In multivariate logistic regression analysis, TNBC subtypes (OR 0.37, CI 95% 0.2,0.7; p = 0.002) and age (OR 1.02, CI 95% 1.004,1.05; p = 0.02) were the only independent predictors of downstage to pN0 after NACT in node positive patients.

Conclusion(s): NLR is not a predictor of conversion to pN0 in breast cancer patients with positive lymph-nodes at diagnosis, undergoing NACT. In this setting, the only predictors of pN0 are TNBC histotype and age.

Conflict of Interest: No significant relationships.

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Clinicopathological characteristics and recurrence patterns among young and very young breast cancer patients in Middle East
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Goals: About twenty percent of breast cancer (BC) patients in the Middle East are women ≤ 40 years. Notably, young patients, particularly the very young (≤ 35 years), are underrepresented in studies, depicting their unmet needs. We conducted a dedicated study of young patients with a large cohort of very young women to determine their clinicopathological characteristics and the recurrence pattern.

Methods: We reviewed two centers' files in Alexandria, Egypt, of women ≤ 40 years with stage I-III BC diagnosed from Jan 2008 to Dec 2017 and followed up until Dec 2019. Patients were categorized into very young (≤ 35 years: BCVY) and young (>35 years: BCY). We determined their clinicopathological characteristics and the recurrence pattern.

Results: There were 949 patients in this analysis: 437 (46%) were very young. Hence our study represents a huge cohort of more than 400 women ≤ 35 years. The median age at diagnosis was 36 years (range: 18–40). Table 1 summarizes the clinicopathological characteristics of BCY and BCVY. BCVY had more tumor grade 3 (23 vs. 17, p = 0.034), lymphovascular invasion - LVI (63.9 vs 60.7%, p = 0.381) and high Ki-67 (70 vs. 59.8%, p = 0.209). Women ≤ 35 years were significantly less hormonal-positive (75.2 vs. 83.2, p = 0.004), more TNBC (16 vs 9%, p = 0.002), and HER2 positive (22.2% vs 20.8 p = 0.654) than women >35 years. BCVY had a higher node-negative rate (33.5 vs. 31.6%, p = 0.54) and fewer stage 3 (37.7 vs 45.7%, p = 0.019). The very young underwent more breast conservative surgeries (BCS) than the young (36.7 vs.31.1%, p = 0.069). All patients were irradiated, and a boost was added to all those who underwent BCS. There were 280 (30%) initial recurrences in the whole cohort, and the median time to relapse was 24 months (range: 1–119). Very young women tend to have a higher recurrence rate than BCY (31 vs. 28%, p = 0.317). Compared to BCY, the BCVY had more visceral (17 vs. 14%, p = 0.477) and locoregional (35 vs. 17%, p = 0.001) as first relapses. Besides, BCVY had a fewer first incidence of bone only (26% vs. 33%, p = 0.166), contralateral breast (11 vs 14%, p = 0.353), and brain (6 vs 8%, p = 0.496) recurrences than BCY.

Conclusion(s): The clinicopathological characteristics and recurrence patterns differ in young and very young BC women. The latter had more aggressive features and a higher first relapse rate. This is a large series of BC in very young women, and it shows that even in women ≤ 40 years, age is still a bad prognosis.

Conflict of Interest: No significant relationships.

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The Oncotype DX® assay use in breast cancer in an Australian institutional setting
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