Real-world epidemiologic and biological characterization of breast cancer in Algeria: A multicenter real world data study on 6044 patients

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Background

Breast cancer is the most frequently diagnosed cancer among women in Algeria, accounting for 46.0% of all female malignancies, with 13,161 new cases reported in 2022 according to the National Network of Cancer Registries. This trend is consistent with global estimates from GLOBOCAN, which also identify breast cancer as the leading cause of cancer among women worldwide. Despite its public health burden, national-level epidemiologic and clinicopathologic data on breast cancer in Algeria remain scarce. Most available studies are single-center or regional, limiting their generalizability. Furthermore, North African populations, including Algerian women, have distinct lifestyle, reproductive, and sociodemographic characteristics compared to Western populations, which may influence disease presentation and biology. To address this gap, we conducted a large, retrospective, multicenter study aiming to describe the demographic, clinical, and pathological characteristics of Algerian breast cancer patients diagnosed in 2024, based on real-world data from major oncology centers across the country.

Patients and Methods

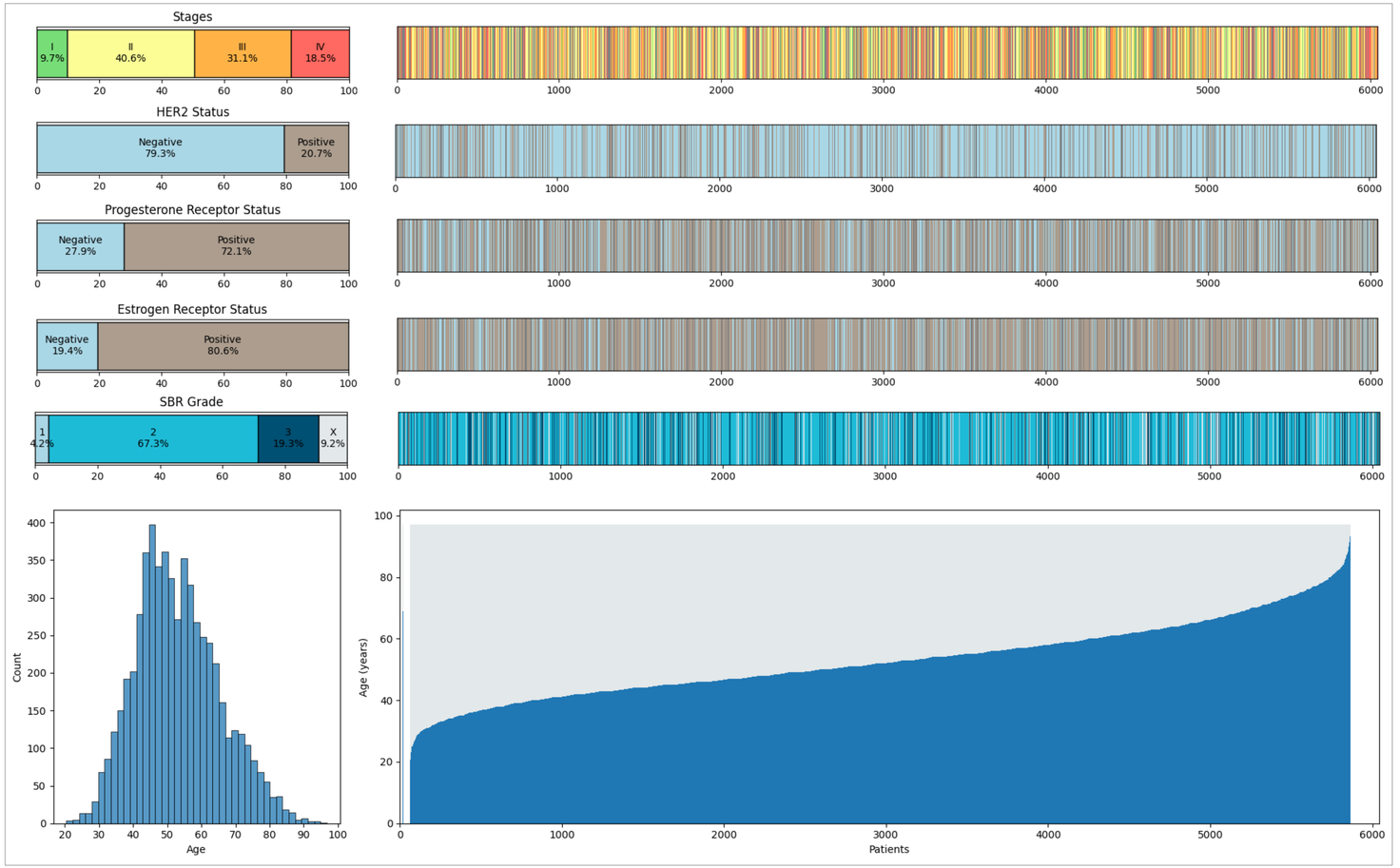
We conducted a national, retrospective, multicenter study involving 23 oncology centers across Algeria. Eligible participants were female patients diagnosed and treated for breast cancer between January 1 and December 31, 2024. Data were collected from medical records as part of real-world clinical practice. Variables extracted included age at diagnosis, menopausal status, family history of cancer, clinical stage at presentation, histological type and grade, estrogen receptor (ER), progesterone receptor (PR), HER2 status, Ki67 index, and molecular subtype classification. All data were anonymized and centralized in a secure national database. Descriptive analyses were planned to summarize the demographic, clinical, and pathological characteristics of the study population.

Results

A total of 6,044 women with breast cancer diagnosed in 2024 were included from 23 oncology centers across Algeria. The median age at diagnosis was 52 years (range: 20-86), and 60% of patients were postmenopausal. Most tumors were detected through self-examination (67.72%), while screening accounted for only 4.17% of cases. The left breast was affected in 48.99% of cases, the right breast in 48.25%, and bilateral involvement was observed in 2.76%. Invasive carcinoma of no special type was the predominant histology (79.90%). Grade III tumors (SBR) accounted for 19.33% of cases. Molecular subtypes were distributed as follows: luminal B (49.33%), luminal A (18.11%), HER2-positive (20.70%), and triple-negative (11.86%). Tumor size distribution showed 13.63% of cases were T1. Advanced tumors (non-inflammatory T4a/b/c) were found in 21.56%, and inflammatory breast cancer (T4d) in 4.74%. Node-negative disease (N0) was present in 36.87%, while N3 involvement was seen in 3.54%. Distant metastases at diagnosis were documented in 15% of patients. The median time to initial treatment was 50.5 days.

Conclusion

This large, retrospective multicenter study provides the first national real-world overview of breast cancer in Algeria. Most patients presented with luminal subtypes, but a substantial proportion had locally advanced (T4: 26.3%) or metastatic disease (15%) at diagnosis. Most tumors were detected through self-examination, while organized screening remained limited. The observed diagnostic and treatment delays, as well as the frequency of advanced-stage presentation, highlight the urgent need to strengthen early detection programs and promote timely access to care across the country. These findings serve as a foundation for future national strategies aimed at improving breast cancer outcomes in Algeria.



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References

1. International Agency for Research on Cancer. GLOBOCAN 2022: Algeria – Fact Sheet. Lyon, France: IARC; 2023. Available from: https://gco.iarc.who.int
2. Bounedjar, A., Melzi, M.A., Idir, H., Heba, N. (2022). General Oncology Care in Algeria. In: Al-Shamsi, H.O., Abu-Gheida, I.H., Iqbal, F., Al-Awadhi, A. (eds) Cancer in the Arab World. Springer, Singapore. https://doi.org/10.1007/978-981-16-7941-2_2
3. National Cancer Registry Network, 2022, Algeria
4. Smaili F, Bouafjella A, Dib A, Brahla S, Zidane H, Reggad R, Bendib A, Abdelouahab A, Bereksi-Reguig F, Yekrou D, Bentouati A, Filali T, Chirouf A, Djehal N, Mahfouf H, Mechiat F, Tadjerouni H, Sedkaoui C, Hikem M, Amber A, Bouzid K, Ladjeroud A, Ghomari S, Aris H, Saidi S, Larhbali R, Saidi MA, Haddouche A, Kedar M, Bounedjar A, Talha S, Benbrahim W, Ammari A, Boushaba A, Rabah A, Ameziane N, Benabdallah F, Djedi H, Kouadri N, Bensalem A, Zoghimi S, Oukkal M, Hadjam F, Larbaoui B, Rekai K, Azizou N, Badaoui A, Alid M, Abada M, Moussei A, Benmehdi F, Benzidane N, Boualga K, Mesli S. Epidemiology of breast cancer in women based on diagnosis data from oncologists and senologists in Algeria. Cancer Treat Res Commun. 2020;25:100220. doi: 10.1016/j.ctarc.2020.100220. Epub 2020 Oct 10. PMID: 33333411.

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