

Appendix 2: Population description

1) Population for the period 2015-2019:

A total of 284 breast cancer patients who underwent surgery between January 2015 and December 2019 were evaluated. Table 1 describes the characteristics of the population evaluated. The median age was 58 years (range 24 to 95). Seventy percent (n=199) underwent primary surgery for invasive carcinoma, 20% (n=57) were prescribed systemic treatment with neoadjuvant chemotherapy (NAC) prior to surgery, and 10% (n=28) underwent surgery for carcinoma in situ.

Regarding the stages upon completion of the diagnosis, according to the AJCC eighth edition TNM staging system, 10% of patients (n=28) were in stage 0 (carcinoma in situ), 36% of patients (n=101) were in stage I, 39% of patients were in stage II (n=111), and 15% of patients were in stage III (n=44). The sizes of the primary tumor were 10% (n=28) categorized as carcinoma in situ, 49% (n=138) categorized as T1 (≤ 2 cm), 31% (n=89) categorized as T2 (between 2.1 and 5.0 cm), 5% (n=15) categorized as T3 (greater than 5 cm), and 5% (n=14) categorized as T4 (tumor involving the skin and/or chest wall, or inflammatory carcinoma). Regarding axillary involvement, 61% (n=173, including carcinomas in situ) had disease-free axillae (N0), 24% (n=68) had 1 to 3 positive nodes (N1), 9% (n=25) had between 4 and 10 positive nodes (N2), and 6% (n=18) had more than 10 positive nodes and/or supra- or infraclavicular node involvement (N3).

With regard to histological subtypes, 74% (n=210) were NST (non-specific type) carcinomas, 7% (n=21) were lobular carcinomas, 9% (n=25) corresponded to other less frequent histological subtypes, and 10% (n=28) corresponded to carcinomas in situ. In relation to immunohistochemical classification, 79% (n=194) of infiltrating tumors were found to express estrogen receptors (ER), also called luminal tumors, 6% (n=15) expressed only the Her2neu receptor (without hormone receptor expression), and 15% (n=38) did not express hormone receptors or Her2neu (called triple-negative tumors). In 9 cases, complete data for complete categorization according to immunophenotype were not found.

Regarding the delay from diagnosis to treatment initiation, an overall median delay of 59 days (range 10 to 198) was found. When breaking down these data according to the type of primary treatment initiated, the median delay was 62 days for surgery (range 10 to 198) and 53 days for chemotherapy (range 18 to 178).

2) Population for the period 2021-2024:

A total of 178 patients with breast cancer diagnosed and treated at the institution between January 2021 and December 2024 were evaluated (Table 1). The median age was 57 years, with a range of 31 to 99 years. Eight percent (n=14) were diagnosed and operated on for ductal carcinoma in situ. The remaining 92% (n=164) of patients were diagnosed with invasive carcinoma, and 57% (n=94) underwent initial surgery and 43% (n=70) underwent neoadjuvant chemotherapy.

With regard to the initial staging of patients, according to the AJCC eighth edition TNM staging (reference), we observed that 53% (n=94) were in stage II at diagnosis, followed in frequency by stage I, which accounted for 28% (n=50) of patients. Eleven percent (n=20) were stage III at diagnosis and 8% (n=14) were stage 0 (carcinoma in situ).

Regarding immunohistochemical classification, 82% of infiltrating tumors (n=134) expressed the estrogen receptor (luminal tumors). Forty percent of invasive cancers (n=66) were represented by the luminal A-like subtype (estrogen receptor positive, progesterone receptor ≥ 20 , low KI 67 proliferation marker, with a histological grade of 1 or 2 and Her2neu receptor negative), while 37% (n=60) corresponded to the luminal B-like group (estrogen receptor positive, progesterone receptor ≤ 20 , high KI 67, histological grade 3, and Her2Neu negative). Five percent (n=8) expressed both estrogen receptor and Her2neu receptor, and 6% (n=9) expressed only Her2neu receptor. Ten percent (n=16) did not express any receptor. In 5 patients, data were not available for complete categorization according to immunophenotype.

Regarding the delay in starting treatment in general, including the date of surgery and the date of initiation of neoadjuvant chemotherapy, we observed a median range of 86 days, with a range of 7 to 288 days. For the delay from diagnosis to the start of surgery, we observed a median of 115 days with a range of 14 to 288 days, and for the delay to the start of neoadjuvant therapy, a median of 73 days with a range of 7 to 205 days.