Background: Standard treatment of locally advanced breast cancer is not yet established. In most institutions treatment is multimodal and consists of primary chemotherapy, surgical treatment with or without radiotherapy (RT) and hormonal therapy. To find out whether the age influences the kind of surgical treatment in a group of locally advanced breast cancer patients (LABC patients) responding to neo-adjuvant chemotherapy.

Methods: Analysis included 39 LABC patients treated from January 2000 till January 2003 with neo-adjuvant chemotherapy and surgical treatment in Clinical Center of Montenegro, Podgorica. All patients had locally advanced disease (T2, T3 or T4b and/or N1-2 M1 sc). Patients with T4d tumors were excluded. The treatment consisted of neo-adjuvant chemotherapy, mostly anthracycline based, and surgical treatment - radical mastectomy or breast conserving surgery. Additional procedures after surgical treatment included 3-4 cycles of the same chemotherapy, hormonal treatment and/or RT.

Results: Median age of patients was 47 years (range: 24-67 years). Thirty patients were initially in stage IIIA (14 post- and 16 premenopausal patients, respectively), 6 patients in stage IIIB (2 post- and 4 premenopausal, respectively), and 3 patients in stage IV, with supraclavicular node involvement (M1+sc, 2 post- and 1 premenopausal, respectively.). Applied preoperative chemotherapy was anthracycline-based regimen (FAC, 3-6 cycles), except in one patient in premenopausal group and 2 patients in postmenopausal group, who had been treated with CMF chemotherapy due to anthracycline contraindications. All analyzed patients responded to neo-adjuvant chemotherapy, mostly with partial or minimal remission of their tumors. In a whole group 15/39 (38%) patients had breast conserving surgery (8 pre-, 7 postmenopausal, respectively), 24/39 (61%) patients radical mastectomy (13 pre-, 11 postmenopausal, respectively). In a group of patients old 40 years and younger only 2 partial resections were performed (2/9, 22%), and 7 radical mastectomies.

Conclusion: Although in a small group of patients, our results confirmed that effective neo-adjuvant chemotherapy enabled breast surgery of LABC, even breast conservative procedure in some patients. However, breast conservation was not possible in majority of young patients. This suggests the investigation of more aggressive neo-adjuvant treatments, especially in patients old 40 years or younger.