Background: for breast cancer survivors (BCS), vitamin D status is of special concern: there is a possible relationship between vitamin D deficiency and increased rates of breast cancer recurrence and mortality; this population is also vulnerable to bone loss and musculoskeletal symptoms. Data show that BCS have 15% higher fracture risk than women without a history of breast cancer.

Objective: to evaluate the circulating concentrations of 25-hydroxyvitamin D [25(OH)D] in a population of BCS.

Methods: observational study. We collected data on 25(OH)D serum levels at the first visit of 74 BCS women with stage I-III breast cancer. The study population was drawn from patients admitted to Oncologic Menopause Surgery of DAIMI AOU Careggi from 2010 to 2013. Deficiency of 25(OH)D was defined as serum 25(OH)D <20 ng/mL, insufficiency was defined as 20 to 29.9 ng/mL.

Results: the patients had a mean age of 47.5 years, a mean body mass index (BMI in kg/m2) 23.4, a mean age of menarche of 12.7 years and mean age of menopause of 47.27 years. The mean 25(OH)D level was 19.6 ng/mL. 24 women (32%) had 25(OH)D levels between 20 to 29 ng/mL, and 33 (44%) had levels <20 ng/mL at the first visit.

Conclusion: Numerous studies demonstrated that the vitamin D insufficiency rate among breast cancer patients is >30%. Our findings are consistent with a recent study by Crew et al that found an insufficiency rate of 74% among breast cancer patients. Our study suggests the importance of dosing serum levels of 25(OH)D in BCS for the large prevalence of deficiency in this population. Recent studies affirm that deficiency of 25(OH)D increases risk to developing hypertension, diabetes, and myocardial infarction. Normal serum levels of 25(OH)D are important not only for bone health, but also may reduce recurrence breast cancer among BCS.