ANALYTICS FOR ADAPTED PHYSICAL EXCERCISE EFFECTIVENESS AIMED AT PREVENTION OF RISK FACTORS FOR OSTEOPOROSIS AND FRAILTY IN ELDERLY PATIENTS AFFECTED BY BREAST CANCER

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Introduction. Prevention of Osteoporosis is a major objective in the management of patients treated for breast cancer with aromatase inhibitors.

Objectives. Denosumab proved effective treatment in prevention of fractures in subjects whose breast cancer was treated with aromatase inhibitors. We evaluated the effectiveness of combined medical treament with adapted physical excercise programme.

Materials and Methods. 18 elderly patients affected by breast cancer were followed for 12 months. A post surgery preventative treatment with aromatase inhibitors combined with Denosumab was prescribed in order to prevent fractures. From T0 to T24 the design of the study included: 1) blood tests; 2) spine and femur bone density scan DEXA; 3) lumbar dorsal spine morphometry; 4) short physical performance battery (SPPB). SPPB evaluates physical performance whose level scores between 0 and 12. In 10 patients (Group A) we evaluated the effectiveness of Denosumab treament on osteoporosis prevention, while in group B 8 patients were treated with a combination of Denosumab and occupational therapy for effectiveness. Subjects were instructed on how to perform specific excercises at home.

Results. Group A patients (mean age 73 + 4 years) had an average SPPB score 7 (p 0.05) at T0. Group B patients (mean age 72+3 years) had an average SPPB score 7 (p 0.05). At T 24 group A patients average SPPB score was 9 (p 0.05) showing an improvement in gait rate. At T24 group B patients had a an average SPPB score 10 (p 0.05) showing improvement in balance & gait rates.

Conclusions. This study proved that elderly patients affected by breast cancer treated after surgery with aromatase inhibitors, according to analyticals for adapted workout combined with Denosumab it’s more appropriate to control the severity of frailty rate, symptoms, prevention of falls and physical strength empowerment.