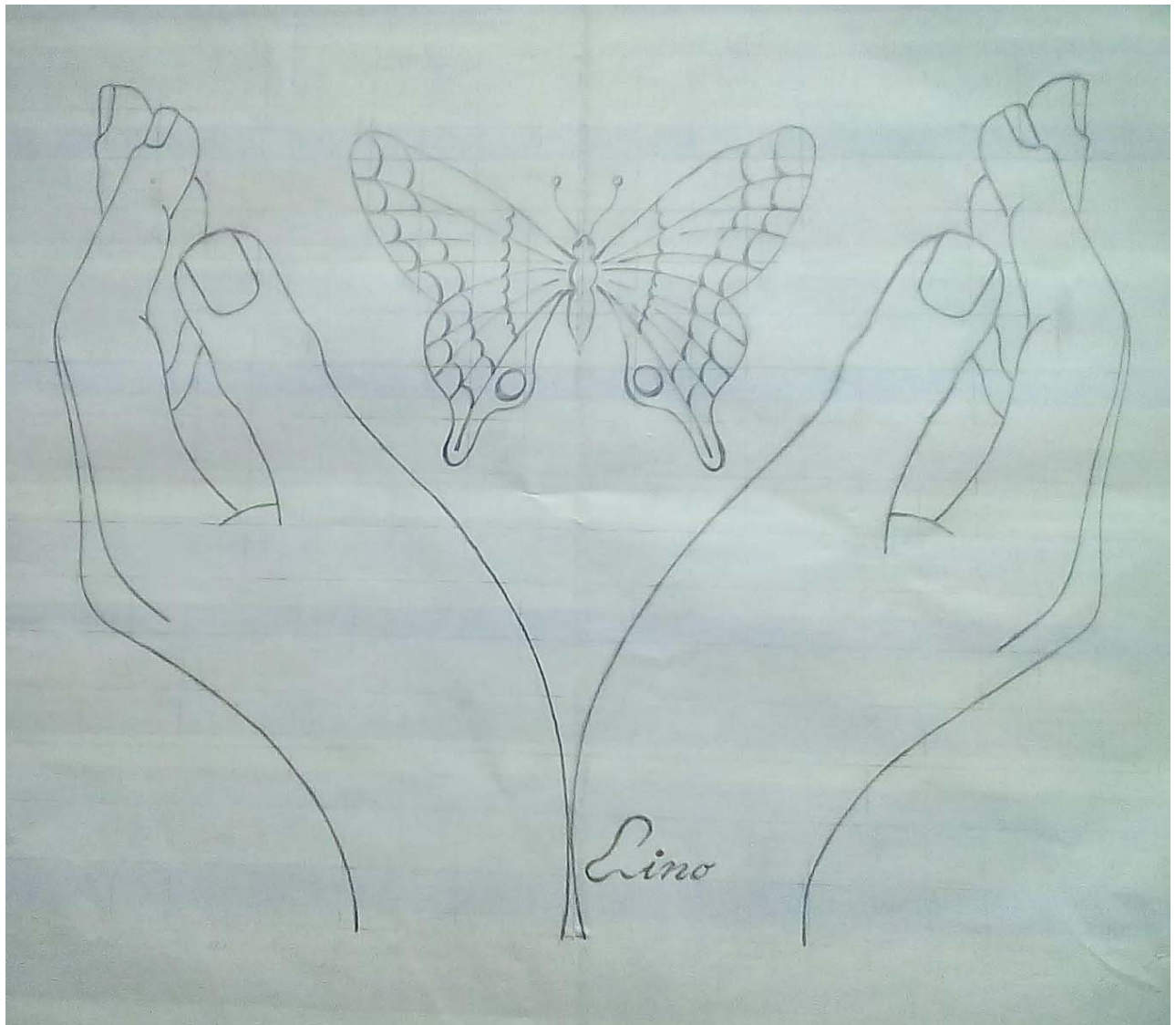


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**CORRELATION STUDY BETWEEN ULTRASOUND DENSITOMETRIC PARAMETERS (T-score / Z-score) AND VITAMIN D DOSAGE IN PATIENTS AFFECTED BY OSTEOPOROSIS TREATED WITH XARENEL.**

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**KEY-WORDS: ULTRASOUND DENSITOMETRIC PARAMETERS (T-score and Z-score), VITAMIN D DOSAGE, OSTEOPOROSIS, MEDICAL AND NURSING ASPECTS.**

**ABSTRACT**

**Aim:** the aim of our study project is to screen the population of subjects over 65 with an ultrasonographic densitometer to highlight the possible presence of osteopenia or osteoporosis by correlating the densitometric data (T-score) in order to identify possible differences in the values pre- and post-treatment for osteopenia or osteoporosis. **Materials and Methods:** Our study enrolled subjects over the age of 65, 7 women and 4 men, who have voluntarily agreed to undergo screening for osteopenia or osteoporosis using a non-invasive method based on ultrasound assessment. All patients were asked for informed consent to carry out the screening procedure and to process their personal data. Following the ultrasonographic evaluation, the patients enrolled in the study underwent an evaluation of their vitamin D value after 1 month of treatment with Xarenel 50,000 iu 2 times a week for 4 weeks. The re-evaluation of bone densitometry was carried out after approximately 3 months. **Results:** Data analysis showed a statistically significant variation between the T score value at 3 months after treatment with Xarenel 50,000. A similar result was noted for the correlation between vitamin D values. Analysis of all measured variables showed a statistically significant variation between the pre- and post-treatment vitamin D value and the T score values evaluated at the third month after treatment with T score (-1.557 +/- 1.262 vs 0.905

+/- 0.584 P = 0.041\*), Z score (- 9.057 +/- 1.262 vs 0.205 +/- 0.584 P = 0.047\*) and Vitamin D (20.250 +/-2.816 vs 46.375 +/- 5.731 P < 0.001\*). **Discussion:** From the data in the previous tables, a statistically significant variation emerges between the parameters derived from bone densitometry performed with ultrasonographic methodology and treatment with Xarenel 50,000 ui 2 times a week for 4 weeks. The data from our study allow us to state that treatment with Xarenel 50,000 ui 2 times a week for 4 weeks determines a significant reduction in the T score value at 3 months assessed by ultrasound bone densitometry. The small size of the sample under examination, in addition to the poor compliance with the execution of the control tests for follow-up, does not allow us to extend the results to the entire population affected by osteoporosis. **Conclusions:** The pilot study we conducted allowed us to highlight the positive effect of treatment with Xarenel 50,000 ui in patients with osteoporosis. The expansion of the study sample and a stratification by age group could allow us to confirm the preliminary results for the entire geriatric age group. Currently, the size of the sample under examination is not sufficient to make a reliable evaluation by dividing the patients into subgroups.

**Table**

	<b>Base</b>	<b>Control</b>	<b>Probability</b>
<b>T Score</b>	<b>-1,557 +/- 1,262</b>	<b>-0,905 +/- 0,584</b>	<b>P = 0,041*</b>
<b>Z Score</b>	<b>(- 9,057 +/- 1,262</b>	<b>-0,205 +/- 0,584</b>	<b>P = 0,047*</b>
<b>Vit D</b>	<b>20,250 +/-2,816</b>	<b>46,375 +/- 5,731</b>	<b>P &lt; 0,001*</b>

Tab. 1 Descriptive analysis of data relating to bone densitometry and vitamin D dosage. The probability is considered significant only if P < 0.050.

## FIGURES

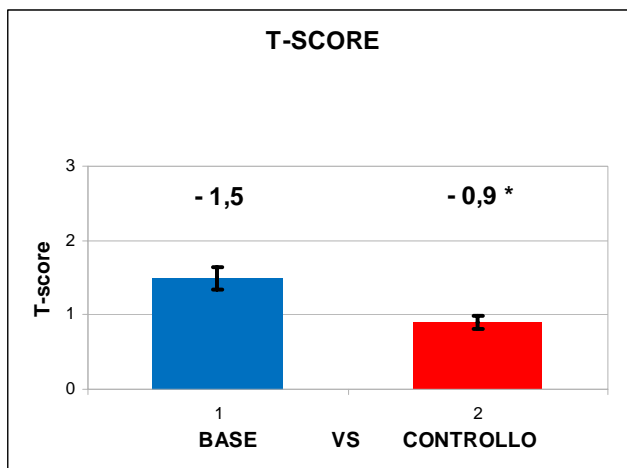


Fig. 1 T score pre and post treatment

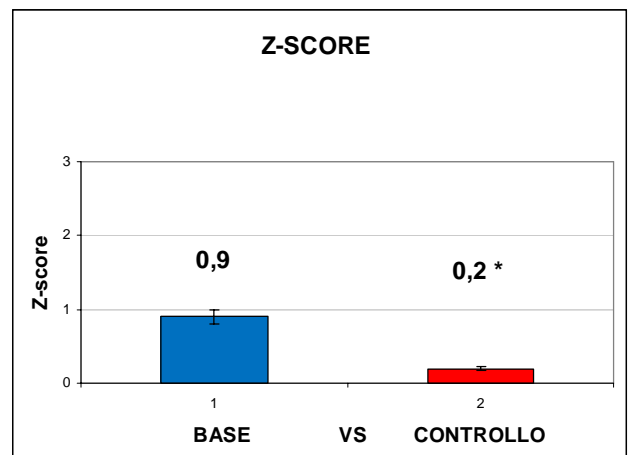


Fig. 2 Z score pre and post treatment

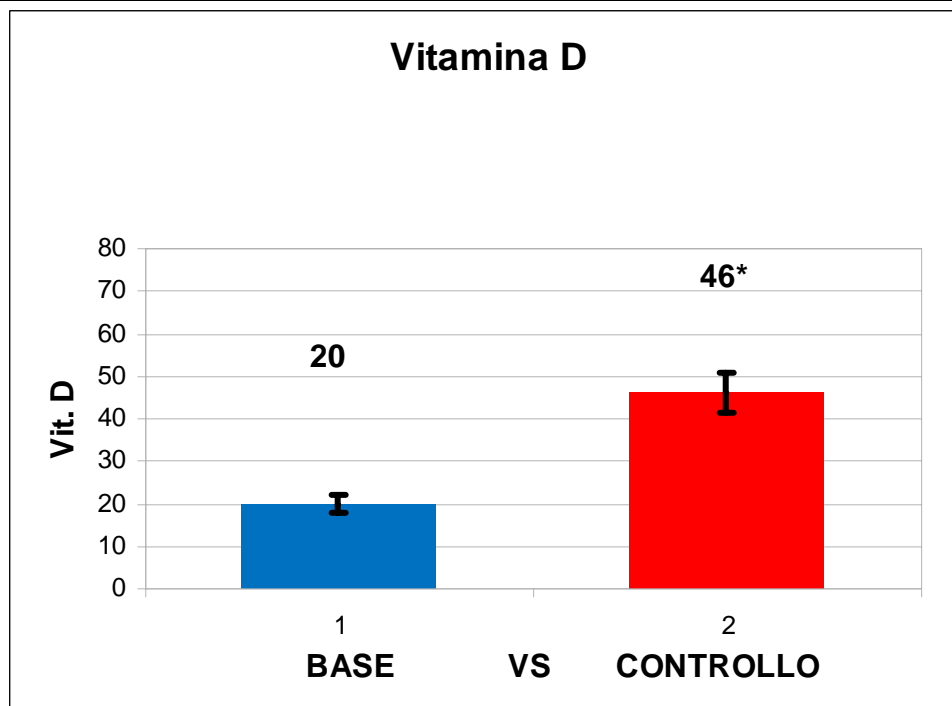


fig. 3 Vitamina D value pre and post treatment.

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