

1. Baseline Characteristics

A total of 60 patients with breast cancer were enrolled in the study. All participants met the predefined inclusion and exclusion criteria. Baseline characteristics are summarized in the following table1. The two groups were generally comparable at baseline; except for serum Vitamin B12 and absolute lymphocytes count differ significantly between the two groups.

Table (1): Baseline Characteristics

	Group I (Radiotherapy + Vitamin D3) (n=30)	Group II (Radiotherapy Alone) (n=30)	P Value
Mean $\pm$ SD.			
Age (years)	52.23 $\pm$ 10.34	54.10 $\pm$ 9.61	0.472
Hemoglobin (g/dl)	11.22 $\pm$ 1.16	11.59 $\pm$ 2.03	0.400
Calcium (mg/dl)	9.39 $\pm$ 0.49	7.73 $\pm$ 3.46	0.472
Magnesium (mg/dl)	1.96 $\pm$ 0.52	2.99 $\pm$ 2.72	0.126
Vitamin D (ng/ml)	13.86 $\pm$ 9.57	12.03 $\pm$ 8.79	0.249
Vitamin B12 (pg/ml)	800.4 $\pm$ 422.7	752.5 $\pm$ 644.4	0.014*
VEGF (pg/ml)	100.4 $\pm$ 12.88	96.10 $\pm$ 13.02	0.203
NF-κB (ng/ml)	0.62 $\pm$ 0.15	0.65 $\pm$ 0.18	0.610
CD8+ (%)	24.93 $\pm$ 5.88	25.60 $\pm$ 10.40	0.761
Absolute CD8+ count	420.2 $\pm$ 256.10	527.1 $\pm$ 298.6	0.156
Absolute lymphocytes count	1420.4 $\pm$ 557.8	2055.9 $\pm$ 726.0	<0.001*

SD: Standard deviation, VEGF: vascular endothelial growth factor, NF- κ B: Nuclear Factor kappa B, CD8+ T cells: Cytotoxic T Lymphocytes

p: p value for comparing between the two studied groups

*: Statistically significant at $p \leq 0.05$

Group I: Breast cancer patients treated with radiotherapy in combination with Vitamin D3 supplementation.

Group II: Breast cancer patients treated with radiotherapy alone.