



MELANOMA AND MELANOCYTIC NAEVI

SEVERE VITAMIN D DEFICIENCY ASSOCIATED WITH STAGE 4 MELANOMA AND BRAF MUTATION STATUS.

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Introduction: Low Vitamin D is known to be associated with a poorer prognosis in melanoma and testing is now recommended in the UK for any new patient diagnosed with melanoma but not for those patients with already established disease.

Objective: To determine Vitamin D levels in patients with primary and metastatic melanoma in comparison to age, sex, stage, season and BRAF status.

Materials and Methods: We tested 124 patients who attended dermatology and oncology clinics at the Royal Marsden Hospital from May 2016-October 2017. Any patients on Vitamin D supplements were excluded. BRAF status was measured in those patients \geq Stage 3.

Results: 124 patients; 65 men and 59 women with an age range of 23-85years were tested. 104 patients (84%) were Vitamin D deficient (≤ 70 nmol/L) ; of which 32 (31%) were severely deficient (≤ 30 nmol/L). Four patients were Stage 0 (3%), eighteen Stage 1 (14%), seven Stage 2 (6%), sixteen Stage 3 (13%) and seventy nine Stage 4 (64%). Of the Stage 4 patients 69 (87%) were Vitamin D deficient. There was no variation in Vitamin D levels with regard to the seasons, gender or age. BRAF status was established in 93 patients; 59 (63%) were BRAF mutant. Of these 22 (37%) were severely Vitamin D deficient compared to 3 (9%) BRAF wild type ($P=0.006$).

Conclusions: Over 80 % of melanoma patients were found to be Vitamin D deficient. Of note 64% of patients had Stage 4 melanoma and with current UK guidelines would not be routinely tested. The finding that BRAF mutation status was significantly associated with severe vitamin D deficiency is also of interest. We recommend testing of all melanoma patients regardless of stage.

