

00447 **Prevalence of Vitamin D Deficiency in Chinese Patients With Early Stage Colorectal Cancer**

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Aims: Multiple studies in Western populations have demonstrated that lower serum Vitamin D (vD) levels are associated with poorer disease outcomes in early stage colorectal cancer (CRC). This study aimed to estimate the prevalence of vitamin D deficiency in Stage II to III Chinese CRC patients in Singapore and describe their clinical outcomes.

Methodology: We prospectively studied 56 Chinese CRC patients with Stage II to III CRC referred to the National Cancer Centre Singapore for adjuvant chemotherapy. Plasma 25-hydroxy vD (25-OH vD) levels were sampled post-operatively and analysed using the Roche Elecsys Vitamin D total assay. Lifestyle and dietary habits of participants were obtained through a questionnaire while disease characteristics were collected from clinical records. Chi-square test and one-way analyses of variance were performed.

Result: In this cohort, we found that 48.0% (27 patients) were vD-deficient (25-OH vD levels <20ng/ml), with a further 37.5% (21 patients) being vD-insufficient (25-OH vD levels 21-30ng/ml). Only 14.5% (8 patients) were vD sufficient (25-OH vD levels >30ng/ml). Median time from surgery to sampling was 17 days (interquartile range [IQR], 4 to 20 days). Differences in tumour characteristics, time from surgery to sampling, self-reported vD intake, time spent outdoors or BMI were not significant between the three vD categories. An incidental association with lower red meat intake and Vitamin D deficiency was found (p=0.007). After a median follow up of 22 months (IQR 17 to 28), 11 patients progressed while 6 had demised. There were no significant differences in progression free survival (PFS) or overall survival (OS) between the vD categories.

Conclusion: A significant proportion of Chinese early stage CRC patients are vitamin D-deficient or insufficient. Further studies with larger sample sizes and longer follow-up periods are necessary to better quantify the association between vD levels and disease outcomes.