

# EVALUATION AND INFLUENCE OF VITAMIN D LEVELS IN ONCOHEMATOLOGICAL PATIENTS WITH PARENTERAL NUTRITION.

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**Background and importance:** Oncohematological patients(OHP) often have very low vitamin D(VitD) levels(<20 ng/dL), which is associated with higher morbi-mortality. Many OHPs have a non-functioning gastrointestinal tract due to the toxicity of the treatments they receive, limiting oral absorption and requiring the use of parenteral nutrition(PN). VitD replacement is an added complication due to factors such as bioavailability and route of administration.

**Aim and objective:** Analyze VitD levels and assess the differences in analytical requests in OHP with PN. Study the frequency and effectiveness of the use of different VitD formulations as restorative treatment.

**Material and methods:** Retrospective observational study of OHP with PN from 2023 to July 2025. Based on medical records and the NP formulation program, the following data were recorded in a database: sex and age, anthropometric parameters, diagnosis, number of days with PN and days elapsed until the request for levels during PN, date and value of all blood VitD levels; evolution and reason for suspension of PN; administration of VitD. Literature review using the keywords PN, VitD and oncohematological patient.

Tabla 1. DESCRIPTION OF PATIENTS

PATIENTS	177 (90 men, 86 women)	
AVERAGE AGE	63 (29-94) years	
AVERAGE BMI	24±5 kg/m <sup>2</sup>	
ONCOHEMATOLOGICAL DIAGNOSIS	Colon-Rectum (16%) Stomach (15%) Esophagus (10%) Upper Gastrointestinal Tract (10%) Ovary (8%)	
PN MAIN INDICATIONS	Gastrointestinal Obstruction (21%) Vomits/Diarrhea (17%) Dysphagia (16%) Enteritis-Enterocolitis (14%) Mucositis (13%)	
PN AVERAGE DAYS DURATION	11 (1-51) days	
AVERAGE DAYS EXPIRED UNTIL REQUEST FOR LEVELS	1 (0-30) days	
AVERAGE AND STANDARD DEVIATION LEVELS MEASURED DURING PN	12±7 ng/dl	
VITAMIN D LEVELS PROFILE	SEVERE IMPAIRMENT(<7,6ng/dL)	30%
	IMPAIRMENT (7,6-20ng/dL)	37%
	(>20ng/dL)	9%
	NOT MEASURED	24%
NUMBER OF PATIENTS WHOSE LEVELS WERE MEASURED	ON THE SAME DAY AS THE END OF THE NP	42%
	ON THE PREVIOUS DAY AS THE END OF THE NP	11%
REASON FOR END PN	DEATH	16%
	PROGRESSION TO ENTERAL NUTRITION	18%
	PROGRESSION TO ORAL NUTRITION	59%
	OTHERS	7%

**Results:** A total of 177 OHPs with PN were included, as described in Table 1. The main indications for PN were related to complications secondary to digestive cancer. The average number of days with PN was 11, and it took 1 day to request levels. Levels were requested in 76% of OHP(12±7 ng/dl), falling within the deficiency range(<20 ng/dl). The most frequent reason for ending PN was progression to oral nutrition(59%). The administration of different VitD formulations was analyzed, but their use was negligible.

**Conclusions:** The high prevalence of vitamin D deficiency in OHP with PN is evident, highlighting the need to standardize testing and optimize levels through a joint protocol with prescribers. This situation represents a significant clinical burden in the course of the disease and suggests that VitD supplementation through PN could be explored as an additional strategy.

