

# EVALUATION OF THE BENEFIT OF CAROB FLOUR ON NINTEDANIB DIARRHEA IN THE TREATMENT OF DIFFUSE INTERSTITIAL LUNG DISEASE

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## BACKGROUND AND IMPORTANCE

**Nintedanib** is a tyrosine kinase inhibitor drug indicated for idiopathic pulmonary fibrosis and other chronic progressive phenotype fibrosis. However, it is difficult to maintain the full dose due to its most frequent adverse effect: **diarrhea**.

Because of the complexity of these patients, multidisciplinary care between nursing and pharmacy is performed. Before starting treatment, oral intake of **carob flour** is indicated to prevent and treat these diarrheas.

Carob is a plant with medicinal use in gastrointestinal disorders as it has anti-inflammatory, anti-diarrheal and anti-ulcer properties. We recommend, according to bibliography, the intake of **20 grams once or twice a day**.



## AIM AND OBJECTIVES

To evaluate the benefit of daily intake of carob flour on diarrhea caused by the antifibrotic drug nintedanib in a tertiary hospital.

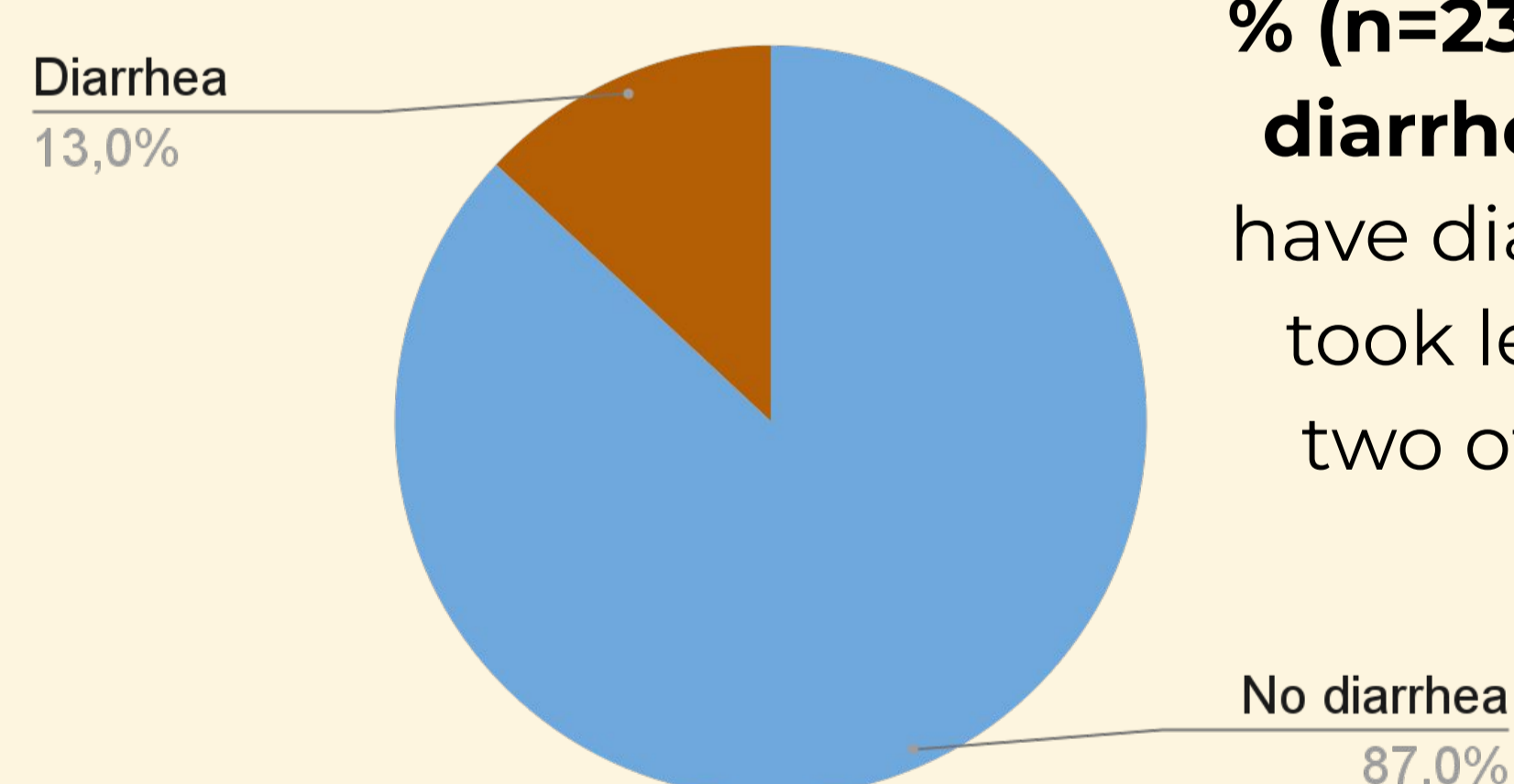
## MATERIAL AND METHODS

All patients dispensed nintedanib from **March 2022 to July 2023** were included. Information regarding nintedanib initiation date, duration of treatment, indication, dosing at cutoff and co-medications was collected from medical history. Carob flour intakes and incidence of diarrhea were registered by nursing and pharmacy on follow-up.

## RESULTS

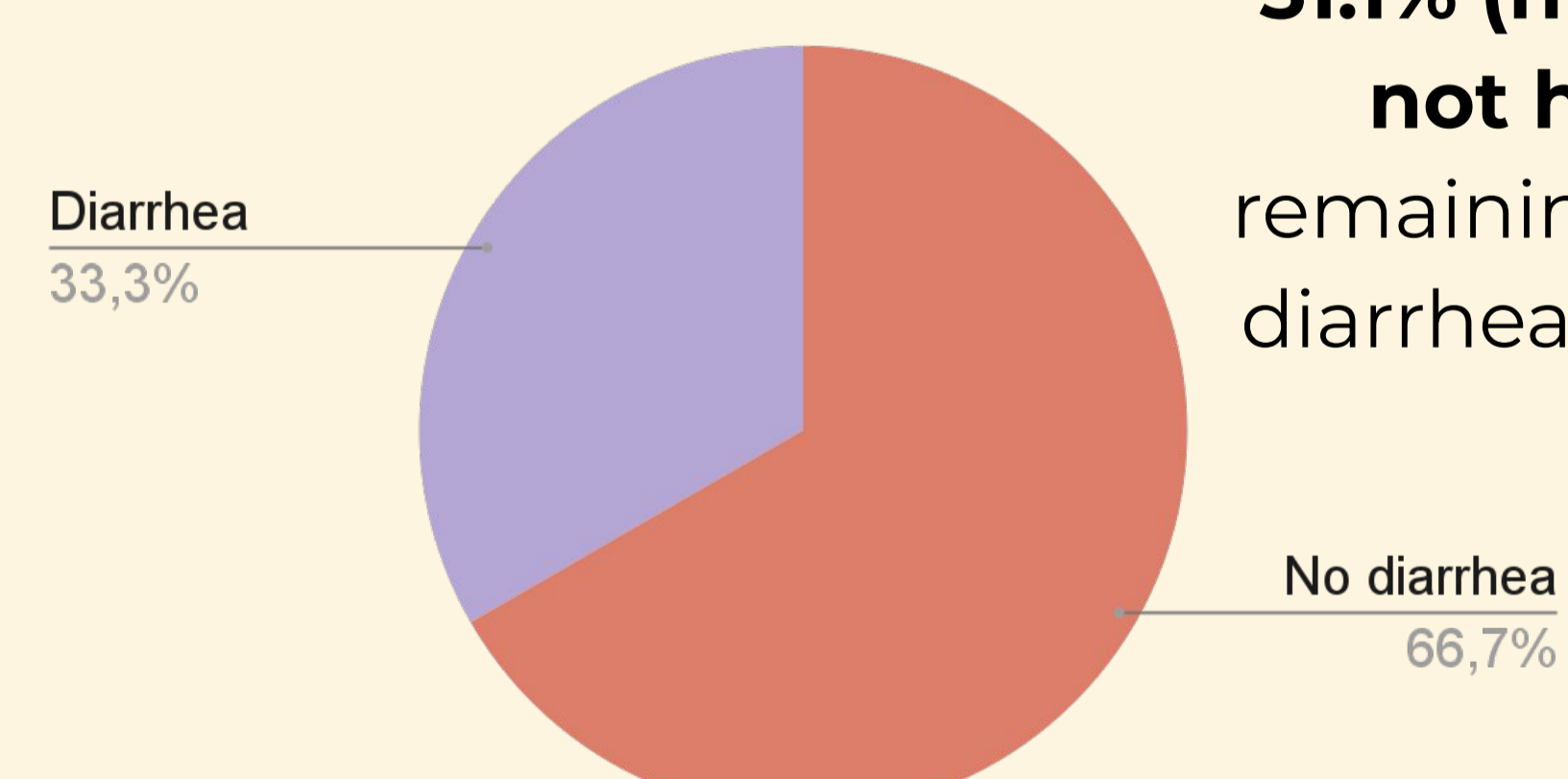
Forty-seven patients were included, highlighting two groups:

### Intake of Carob Flour



Patients who took carob flour: **48.9% (n=23)**, of whom **20 did not have diarrhea**. The other 3 patients did have diarrhea, suspecting that they took less than recommended, in two of them it was necessary to reduce the dose.

### Without Carob Flour



Patients who did not take flour: **51.1% (n=24)**, of whom **16 did not have diarrhea**. The remaining 8 patients did have diarrhea, decreasing the dose in 4 of them.

Most of the patients who did not take flour started treatment more than 12 months ago (62.5%), when this dietary recommendation was not made.

## CONCLUSION AND RELEVANCE

Carob flour is useful in preventing diarrhea caused by nintedanib due to its anti-diarrheal properties because it is rich in starch and fiber, which leads to a decrease in stool production and diarrhea. In addition, the proteins present utilize separate glucose and amino acid cotransporters that promote glucose absorption. By improving stool consistency, it contributes to better tolerance of nintedanib.

More exhaustive studies should be performed to confirm these results, bearing in mind the carob flour intake varies from patient to patient, making results difficult to assess.

