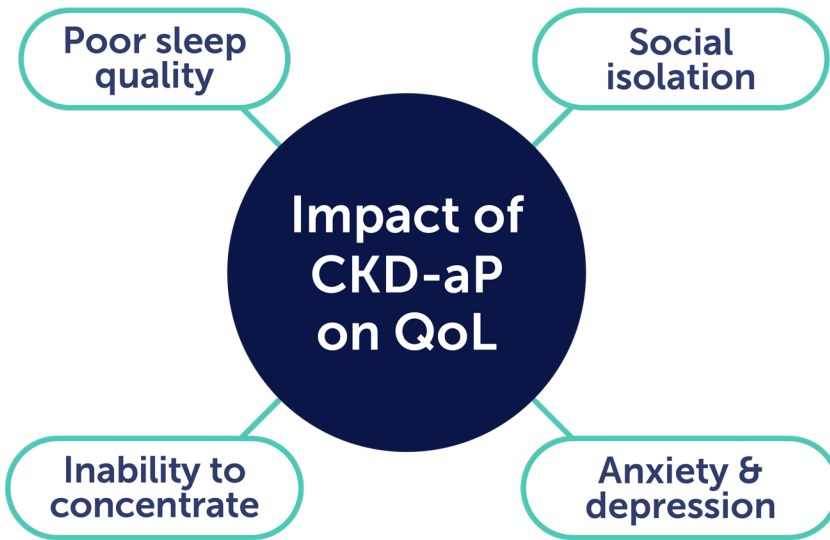


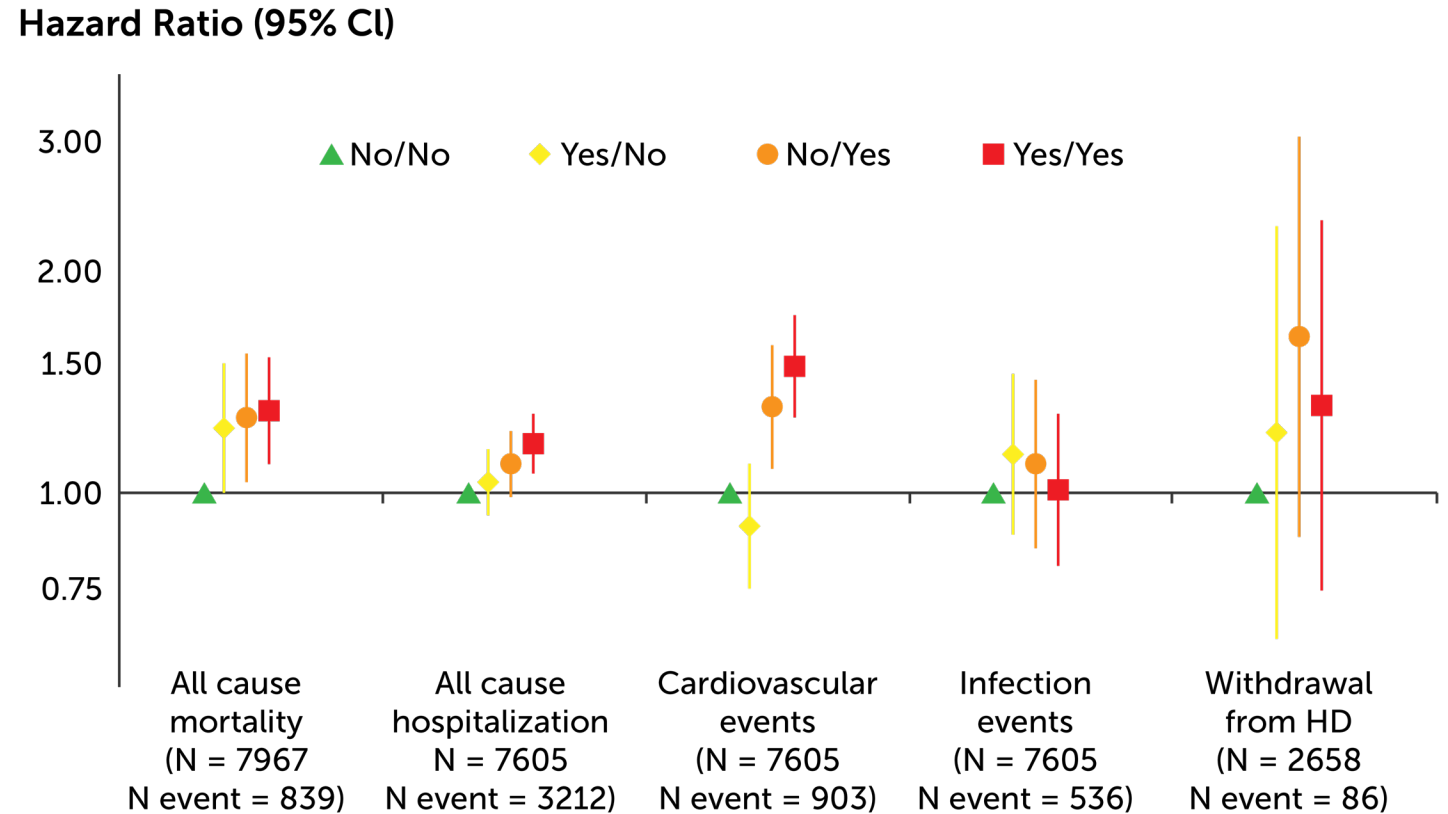
Uremic pruritus or CKD-aP refers to itching associated with chronic kidney disease, which is not linked to other causes of itching





# Association Between Change in Pruritus Symptoms and Subsequent Rates of Clinical Outcomes

Patients with itch have ↑↑ mortality rate



Do you feel itchy?



**GLOBAL** Kidney Academy

ReachMD

Particular attention should be paid to dry skin



# Itch Assessment: WI-NRS

## Assess Itch Severity

Please rate the worst itch you have felt in the previous 24 hours. Select one option:

**0      1      2      3      4      5      6      7      8      9      10**

**0 = No itching**

**10 = Worst itch imaginable**



# Quote by Lucio Manenti, MD

*“It is also highly relevant to monitor CKD-aP over time. Approximately **monthly, bimonthly, every 3 months**, and normally with easily administered scales can this be achieved.”*



# Self-Assessed Disease Severity Scale (SADS)

## Assess Impact of Itch on QoL

### Mild

- I do not generally have scratch marks on my skin
- I do not generally have a problem sleeping because of itching
- My itching does not generally make me feel agitated or sad

### Moderate

- I sometimes have scratch marks on my skin
- I sometimes have problems sleeping because of itching
- My itching can sometimes make me feel agitated or sad

### Severe

- I often have scratch marks on my skin that may or may not bleed or get infected
- I often have a problem sleeping because of itching
- My itching often makes me feel agitated or sad





# CKD-aP Symptoms

**Self-reported or subjective**  
perceptions of a physical  
or psychological disturbance

**Unpleasant**  
and can only be identified  
by the individual  
experiencing them



Lockwood MB, et al. *West J Nurs Res.*  
2019;41(7):1056-1091.

# Quote by Jeanette FINDERUP, PhD

*“Nurses have to be systematically identifying CKD-associated pruritus, and using a patient-reported outcome tool is able, at a minimum, to measure the prevalence and the severity of pruritus.”*



# Symptom Assessment: IPOS-Renal

Below is a list of symptoms, which you may or may not have experienced. For each symptom, please tick the box that best describes how it has affected you over the past week?

	Not at all	Slightly	Moderately	Severely	Overwhelmingly
Pain	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
Shortness of breath	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
Weakness or lack of energy	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
Nausea (feeling like you are going to be sick)	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
Vomiting (being sick)	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
Poor appetite	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
Constipation	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
Sore or dry mouth	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
Drowsiness	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
Poor mobility	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
Itching	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
Difficulty sleeping	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
Restless legs or difficulty keeping legs still	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
Changes in skin	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
Diarrhea	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>



# 5-D Itch Scale

## 1. Duration: During the last 2 weeks, how many hours a day have you been itching?

Less than 6 hrs/day  1      6-12 hrs/day  2      12-18 hrs/day  3      18-23 hrs/day  4      All day  5

## 2. Degree: Please rate the intensity of your itching over the past 2 weeks?

Not present  1      Mild  2      Moderate  3      Severe  4      Unbearable  5

## 3. Direction: Over the past 2 weeks, has your itching gotten better or worse compared to the previous month?

Completely resolved  1      Much better, but still present  2      Little bit better, but still present  3      Unchanged  4      Getting worse  5

## 4. Disability: Rate the impact of your itching on the following activities over the last 2 weeks.

Sleep: Never affects sleep  1

Occasionally delays falling asleep  2

Frequently delays falling asleep  3

Delays falling asleep and occasionally wakes me up at night  4

Delays falling asleep and frequently wakes me up at night  5

	N/A	Never affects this activity	Rarely affects this activity	Occasionally affects this activity	Frequently affects this activity	Always affects this activity
Leisure/Social	<input type="checkbox"/>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
Housework/Errands	<input type="checkbox"/>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
Work/School	<input type="checkbox"/>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

## 5. Distribution: Mark whether itching has been present in the following parts of your body over the last 2 weeks. If a body part is not listed, choose the one that is closest anatomically.

Head/Scalp       Soles       Lower Legs   
 Face       Palms       Tops of Feet/Toes   
 Chest       Tops of Hands/Fingers       Groin   
 Abdomen       Forearms   
 Back       Upper Arms   
 Buttocks       Points of Contact w/ Clothing   
 Thighs       (eg, waistband, undergarment)

Diagnosis of uremic pruritus (CKD-aP)  
is a multidisciplinary challenge



# Quote by Sebastian Koball, MD

*“Regular questioning and documentation of the symptoms is very, very important for our patients, and it should be **firmly integrated into the care of the dialysis patient.**”*



Management of CKD-aP first of all is about shared decision-making





Nephrologist



Dialysis nurse



Multidisciplinary Management of Patients With CKD-aP



Informal caregiver



Dermatologist





# CKD-aP Management



Moisturizing creams



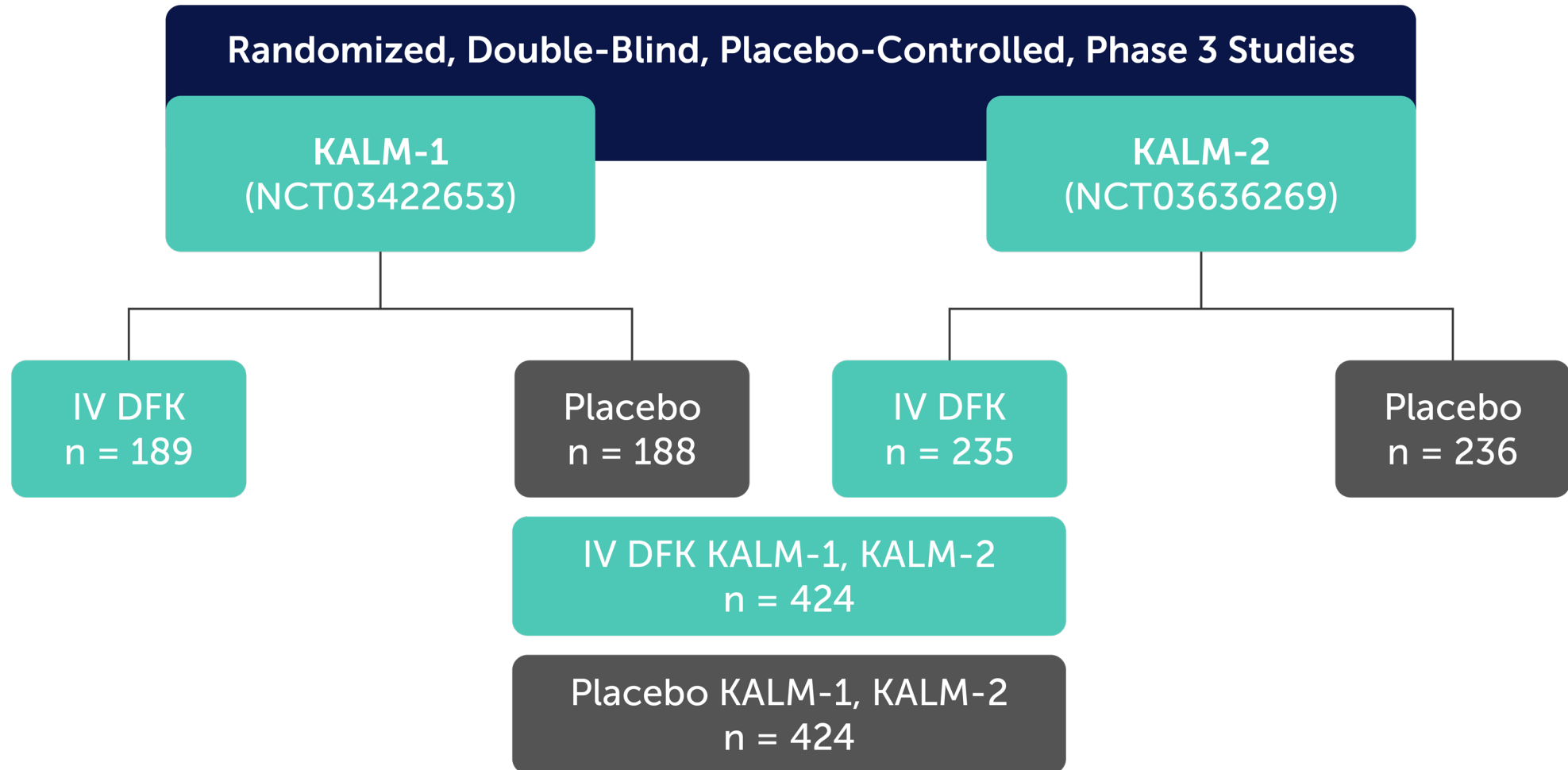
## Difelikefalin:

- Selective kappa-opioid receptor agonist
- Only approved treatment for patients on hemodialysis with moderate to severe CKD-aP

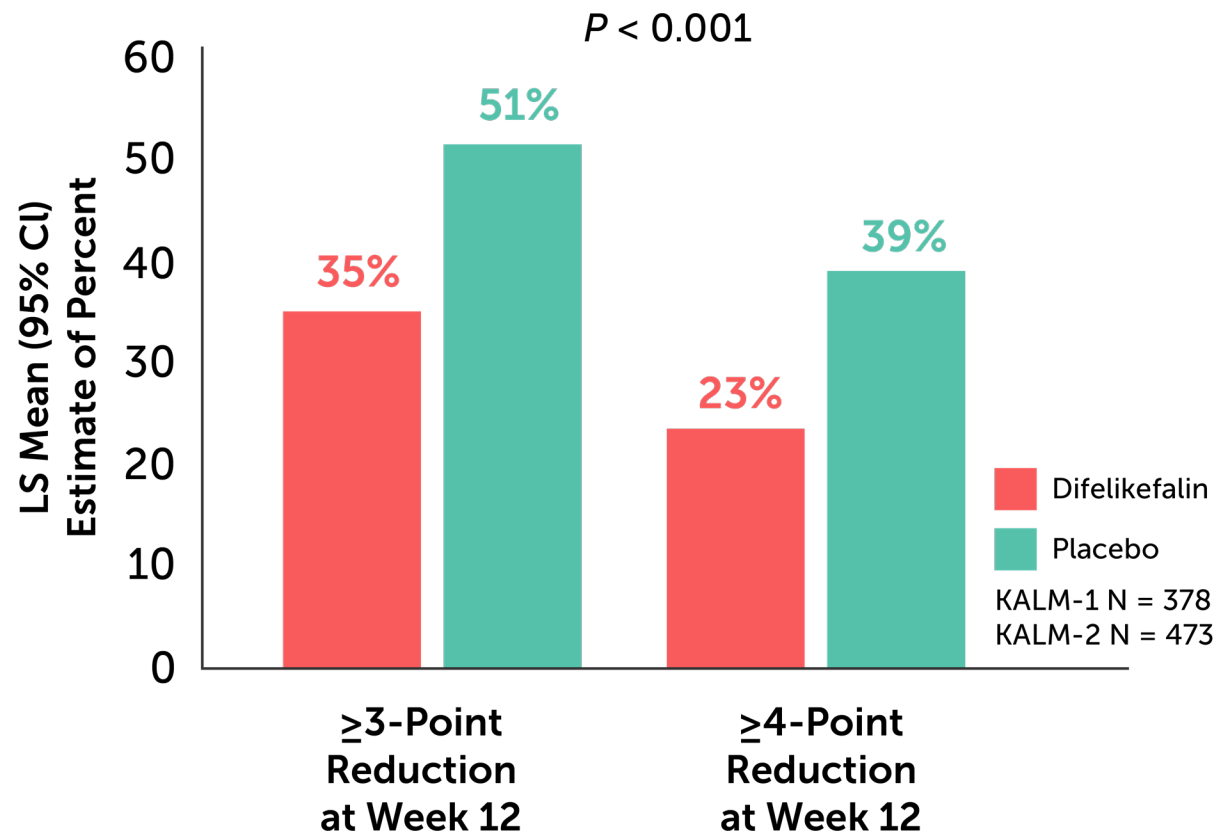


Elman S, et al. *Br J Dermatol.* 2010;162(3):587-593.

# KALM-1 & KALM-2 Trials Design



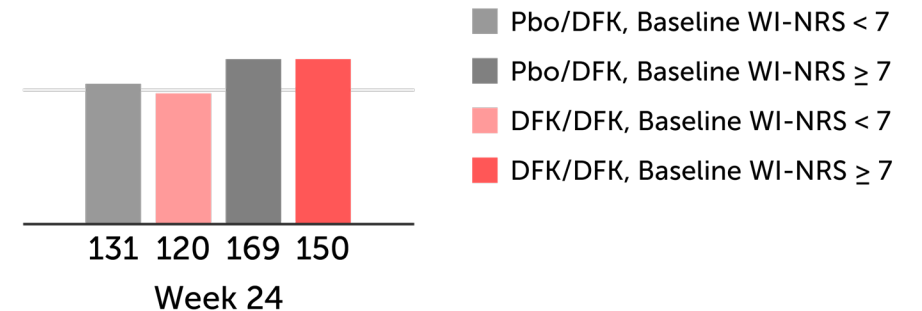
# KALM-1 & KALM-2 Phase 3 Trials



## 5-D Itch total score after 24 weeks of treatment with difelikefalin

Open-label extension (all patients on DFK)

n.s. n.s.



Patients with severe CKD-aP continue to accumulate additional treatment benefit after the initial 12 weeks of treatment with difelikefalin

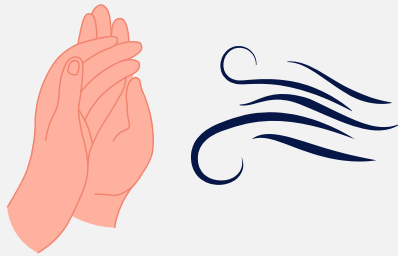


# Quote by Lucio Manenti, MD

“[Difelikefalin] leads to normalization of sleep, which is one of the big problems concerning quality of life for these patients, and it **increased dramatically the mortality of the patient.**”



# Non-Pharmacological Interventions



## Keep skin cool

- Use a fan at home
- Wear light clothing
- Use cotton sheets



## Keep skin hydrated

- Use a humidifier
- Avoid hot showers, use lukewarm water instead
- Avoid excessive bathing (more than once per day)



## Avoid skin irritants

- Avoid wearing irritating clothing, such as wool
- Use fragrance-free soaps and detergents
- Keep fingernails trimmed



# Quote by Lucio Manenti, MD

*“We finally have an approved therapy for the treatment of CKD-aP. This is why it is essential to start studying the symptom more precisely in order to finally understand the way it appears...”*

*“...the fluctuations of the timing of the symptom, the importance of additional therapeutic aids, such as difelikefalin, in alleviating this very annoying symptom that leads to increased mortality due to worsening quality of life.”*

