

# Case Study: Using Pro-Cal™ powder with a patient with squamous cell carcinoma of the tongue

Written by a Senior Oncology Dietitian from St. Luke's Hospital, Dublin, Ireland



## Patient Details & Medical History

<b>Age:</b> 62 years	<b>Gender:</b> Female 	<b>Diagnosis:</b> Squamous cell carcinoma of left base of tongue.
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### Medical history:

The tumour was discovered during elective dental work. The patient had experienced progressive dysphagia for several months leading up to the diagnosis. Following diagnosis, the patient had weekly radiotherapy sessions over the course of seven weeks.

### Relevant history:

#### Anthropometry:

Weight: 49kg

Height: 1.55m

BMI: 20kg/m<sup>2</sup>

Weight loss: 13kg in the 2 years prior to treatment.

**Clinical/medication:** During treatment the patient had symptoms such as dysgeusia (distorted or altered ability to taste), nausea and vomiting, xerostomia (dry mouth) and pain in the mouth and throat. The patient was prescribed a medication for pain relief.

**Diet History:** The patient had always had a small appetite. The patient disliked standard 1kcal/ml liquid oral nutritional supplements and was keen to avoid having these. However, due to the patient's poor dietary intake and the impact of treatment on appetite and dietary intake, the need for nutrition support was discussed with the patient.



## Dietetic Assessment

### Overall aim/goal:

To minimise weight loss during radiotherapy.

### Nutritional Requirements:

**Minimum required:** 30kcal/kg – 1170kcal<sup>1</sup>

1.2g protein/kg – 46g protein<sup>1</sup>

### Dietetic Intervention:

**Week 1-3:** High energy and high protein dietary advice was discussed with the patient. The need for additional snacks and desserts to try to maintain weight was explained. Samples of a milk based liquid oral nutritional supplement were provided.

**Week 4:** The patient tried several types of liquid oral nutritional supplements but was unable to tolerate any of them.

**Week 5-7:** It was agreed that the patient would try Pro-Cal powder, 2-3 x 15g sachets per day, added to foods and drinks. This provided an additional 200-300kcal and 4-6g protein.

Advice was given on how to add Pro-Cal powder to foods such as soups, desserts and mashed potato. The patient also added Pro-Cal powder to tea with milk and tolerated this well.



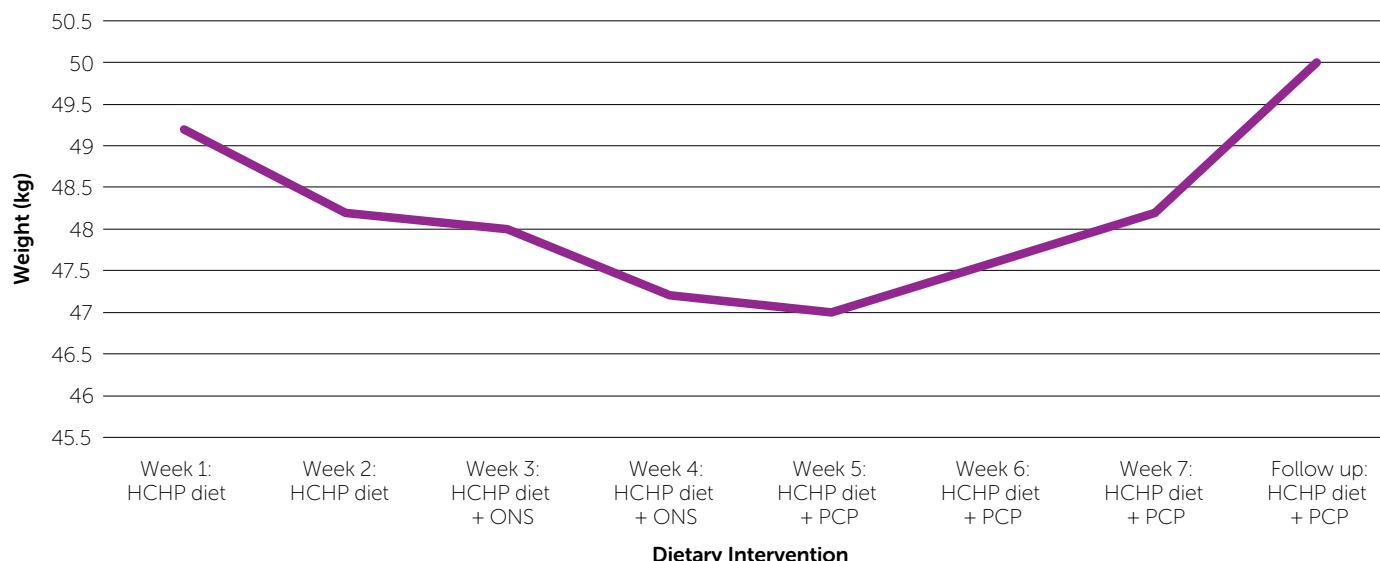
## Results

**Review:** A follow up appointment was arranged post the completion of radiotherapy. The patient had achieved a 7.5% weight gain.

**Outcome measures:** The aim to minimise weight loss during radiotherapy was achieved once the patient started on Pro-Cal powder. Below shows the patient's weight trends during radiotherapy with different dietary interventions.

- **HCHP:** high calorie high protein diet
- **ONS:** oral nutritional supplement
- **PCP:** Pro-Cal powder

### Weight trends during radiotherapy with different dietary interventions





## Discussion and Conclusion

Pro-Cal powder is a useful product to help increase energy and protein intake.

It was found that Pro-Cal powder could:

- Be offered as an alternative option to liquid oral nutritional supplements. The patient was able to add Pro-Cal powder to foods and to drinks such as tea with milk.
- Be a useful alternative oral nutritional supplements for those patients who have thick secretions as liquid oral nutritional supplements can feel 'sticky' and leave a 'coating' in the mouth.
- Enable patients to consume more energy and protein with the foods that they enjoy.
- Be helpful for those patients experiencing nausea, due to the 'neutral' taste of Pro-Cal powder.

It is important to note that protein requirements need to be predominantly met through foods and drinks as Pro-Cal powder only provides 2g protein per 15g.

### Reference:

1. Arends J, Bachmann P, Baracos V, Barthelemy N, Bertz H, Bozzetti F, Fearon K, Hüttnerer E, Isenring E, Kaasa S, Krznaric Z, Laird B, Larsson M, Laviano A, Mühlbach S, Muscaritoli M, Oldervoll L, Ravasco P, Solheim T, Strasser F, de van der Schueren M, Preiser JC. ESPEN guidelines on nutrition in cancer patients. Clinical Nutrition. 2017; 36(1):11-48.

**This information is intended for use by Healthcare Professionals only.**

Pro-Cal powder is a Food for Special Medical Purposes and must be used under medical supervision. Suitable from 3 years of age onwards. Pro-Cal powder is for the dietary management of disease related malnutrition. Not suitable as a sole source of nutrition. For enteral use only. Pro-Cal powder contains **Milk** (Milk protein, lactose).



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Vitaflö International Ltd  
Suite 1.11, South Harrington Building, 182 Sefton Street, Brunswick Business Park, Liverpool, L3 4BQ, UK.  
+44 (0)151 709 9020 [www.vitafloweb.com](http://www.vitafloweb.com)

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