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Metabolic and Radiological Recovery in a Stage IV Lung Cancer Patient Using Structured Fasting and Trigonelline Support

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Abstract

This case describes a 51-year-old male with Stage IV NSCLC who experienced a significant weight drop from 68.45 kg to approximately 51 kg during chemotherapy due to prolonged involuntary fasting episodes caused by nausea and loss of appetite. Supervised OMAD fasting and Trigonelline supplementation were introduced in May 2025, resulting in steady metabolic improvement. By November, his weight increased to 61.40 kg. CT imaging (26 June 2025) showed near-complete right lung lesion resolution, stable left lung disease, and no metastasis. This report highlights metabolic support as a beneficial adjunct during cancer therapy.

Introduction

Chemotherapy frequently induces anorexia, fatigue, and metabolic stress. These effects can lead to involuntary fasting and rapid weight loss, worsening prognosis. Structured fasting and nutraceutical support such as Trigonelline may improve metabolic resilience. This case explores how OMAD fasting and Trigonelline aided recovery in a Stage IV NSCLC patient.

Patient Information

- Age: 51 years
- Gender: Male
- Diagnosis: Stage IV NSCLC
- Comorbidity: G6PD deficiency
- Baseline Weight: 68.45 kg
- Lowest Recorded Weight: ~51 kg
- Interventions: OMAD fasting and Trigonelline supplementation

Clinical Course

Chemotherapy sessions took place on 20 February, 13 March, and 3 April 2025. Severe nausea, vomiting, and appetite loss caused multiple involuntary fasting episodes lasting up to 6 days. Weight declined significantly. In May, metabolic recovery began through OMAD fasting and Trigonelline supplementation.

Radiology Findings (CT Scan: 26 June 2025)

- Near-complete resolution of right lung lesion
- Left upper lobe lesion stable (32×15 mm)
- No new nodules
- Mild pleural effusion
- No metastasis

RECIST Outcome: Stable disease with partial response

Weight Progression (ASCII)

68.45 kg | ■■■■■■■■■■■■■■■■■■■■■■■■■■■■ (Jan)
52.45 kg | ■■■■■■■■■■■■■■■■ (30 May)
56.25 kg | ■■■■■■■■■■■■■■■■■■■■■■ (26 Jun)
61.40 kg | ■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■ (24 Nov)

Chemotherapy Timeline (ASCII)

Feb 20 | ● Cycle 1
Mar 13 | ● Cycle 2
Apr 03 | ● Cycle 3

Fasting Intensity Timeline (ASCII)

Feb | ■■
Mar | ■■■■
Apr | ■■■■■
May | ■

Weight Table

Date	Weight (kg)
Jan 2025	68.45
30 May	52.45
26 Jun	56.25
24 Nov	61.40

Conclusion

This case demonstrates that structured fasting and Trigonelline supplementation may support metabolic recovery and radiological stability in Stage IV NSCLC. The patient experienced significant weight restoration and improved clinical function without disease progression. Further controlled studies are warranted.

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