

Follow-up of water-only fasting and an exclusively plant food diet in the management of stage IIIa, low-grade follicular lymphoma

Toshia R Myers,¹ Mary Zittel,¹ Alan C Goldhamer²

¹Department of Research, TrueNorth Health Foundation, Santa Rosa, California, USA

²Department of Nutritional Medicine, TrueNorth Health Center, Santa Rosa, California, USA

Correspondence to
Dr Alan C Goldhamer,
dracg@comcast.net

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DESCRIPTION

Here we present a 3-year follow-up report of a case that was originally published in *BMJ Case Reports* in December 2015.¹ Briefly, a 42-year-old woman presented to her primary physician with a palpable mass in her right inguinal region and was subsequently diagnosed with stage IIIa, grade 1 follicular lymphoma (FL). In November 2014, the patient arrived to TrueNorth Health Center (TNHC) and elected to undergo a 21-day medically supervised, water-only fast, after which she refed on an exclusively whole plant food diet free of added salt, oil and sugar (SOS-free), including refined carbohydrates, for 10 days. Over the course of treatment, her enlarged lymph nodes became impalpable. Follow-up CT scans confirmed reduction in size. She did not undergo standard cancer treatment, maintained the SOS-free diet, and was symptom-free at 3-month and 6-month follow-up visits.¹

In November 2017, the patient returned to TNHC to complete a second water-only fast for the purpose of maintaining health. She reported following the SOS-free diet with minimal exceptions for the previous 3 years. A routine physical examination combined with complete blood count (CBC) and comprehensive metabolic panel (CMP) laboratory testing indicated overall good health and maintenance of weight loss that occurred during her first visit. Remarkably, her lymph nodes were still impalpable. The patient reported that in December 2016 she had computed tomography (CT)/positron-emission tomography (PET) scans which showed no evidence of active disease,

and her oncology visits had been reduced to once per year. In January 2018, follow-up CT/PET scans demonstrated that the axillary, supraclavicular and inguinal lymph nodes were normal in appearance (figure 1), and there was no evidence of hypermetabolic neoplasm. These observations indicate that the patient no longer has evidence of FL. The initial regression has persisted for 3 years with no additional intervention other than dietary change.

The patient's initial regression directly coincided with the timing of her first water-only fast, strongly suggesting a causal relationship. Nonetheless, we are unable to rule out spontaneous regression (SR), which has been reported for nodal lymphomas of various stages and treatment histories at rates of between 10% and 20%.^{2–5} The underlying biological mechanisms responsible for SR in cancer have not been fully elucidated, but

Patient's perspective

Life outside of TrueNorth Health Center (TNHC) is not an easy one. Society, family, and friends all influence one's everyday life. This presents some challenges at times, which is when you really need to apply all of your learnings and advice from the lectures at TNHC. I've followed every piece of advice given to me by the doctors at TNHC. For example, when I attend social gatherings, I eat before I go to avoid being tempted to eat foods that I know are not healthy for me.

What has helped me stay on track has been the will to live a long and healthy life with my kids and husband. I make sure that there are always whole foods in our fridge and avoid purchasing packaged and processed foods. Having a variety of fruits and veggies readily available helps me when I am most hungry. I follow easy recipes and keep my meals simple but extremely healthy, and at home there's always a big pot of vegetable soup, cooked beans or lentils. I also follow an intermittent fasting routine of two meals a day, which has provided great results. My first meal is at 11:30 a.m. and my second is often before 6:00 p.m. Being aware of my successful health achievements has helped me stay compliant because I do not want to regress or compromise my health.

My very best wishes that all who come to TNHC follow the diet and recommendations and achieve their goals.

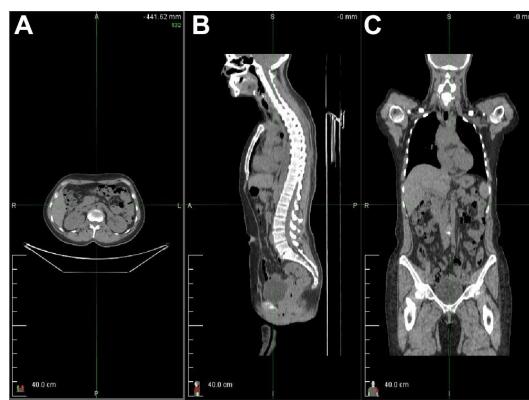


Figure 1 CT images of the (A) axillary, (B) supraclavicular and (C) inguinal lymph nodes following second water-only fast.



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Learning points

- Lymph node size reduction after water-only fasting and dietary adherence was sustained for 3 years in a case of stage IIIa, grade 1 follicular lymphoma (FL).
- An exclusively whole plant food diet appears to maintain an asymptomatic period in a case of stage IIIa, grade 1 FL.

it is often associated with immune system activation or reactivation independent of treatments recognised as causative.^{2,6} Importantly, fasting also appears to stimulate biological mechanisms in humans that may potentiate tumour regression, such as decreasing levels of leptin and insulin-like growth factor 1 (IGF-1).^{7,8} Although data on the effects of fasting on the treatment of human cancer are lacking, animal research suggests that fasting affects cancer cells by reducing nutrients necessary for sustained growth leading to oxidative stress and cell death, activating the immune system or facilitating immune cells to kill cancer cells, and promoting autophagy.⁹ Therefore, it is possible that water-only fasting stimulates inherent biological mechanisms that are similar to those responsible for SR in cancer.

The outcome presented here, as well as additional anecdotal clinical observations from TNHC and data from published literature, provides a rationale for continued research into the effects of water-only fasting and dietary intervention for the treatment and maintenance of low-grade FL.

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REFERENCES

- 1 Goldhamer AC, Klaper M, Fooorohar A, et al. Water-only fasting and an exclusively plant foods diet in the management of stage IIIa, low-grade follicular lymphoma. *BMJ Case Rep* 2015;2015:bcr2015211582.
- 2 Drobyski WR, Qazi R. Spontaneous regression in non-Hodgkin's lymphoma: clinical and pathogenetic considerations. *Am J Hematol* 1989;31:138–41.
- 3 Gattiker HH, Wiltshaw E, Galton DA. Spontaneous regression in non-Hodgkin's lymphoma. *Cancer* 1980;45:2627–32.
- 4 Horning SJ, Rosenberg SA. The natural history of initially untreated low-grade non-Hodgkin's lymphomas. *N Engl J Med* 1984;311:1471–5.
- 5 Krikorian JG, Portlock CS, Cooney P, et al. Spontaneous regression of non-Hodgkin's lymphoma: a report of nine cases. *Cancer* 1980;46:2093–9.
- 6 Thomas JA, Badini M. The role of innate immunity in spontaneous regression of cancer. *Indian J Cancer* 2011;48:246–51.
- 7 Boden G, Chen X, Mozzoli M, et al. Effect of fasting on serum leptin in normal human subjects. *J Clin Endocrinol Metab* 1996;81:3419–23.
- 8 Katz LE, DeLeón DD, Zhao H, et al. Free and total insulin-like growth factor (IGF)-I levels decline during fasting: relationships with insulin and IGF-binding protein-1. *J Clin Endocrinol Metab* 2002;87:2978–83.
- 9 Buono R, Longo VD. Starvation, stress resistance, and cancer. *Trends Endocrinol Metab* 2018;29:271–80.

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