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The Hungry Cancer Patient: A Case of Money Ill Spent.

Allison Zibelli
Thomas Jefferson University

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Allison Zibelli, MD

Clinical Assistant Professor of Medicine
Director, Division of Regional Cancer Care
Sidney Kimmel Cancer Center
Thomas Jefferson University

925 Chestnut St., Suite 220A
Philadelphia, PA 19107
215-370-5385 (personal)
215-955-8874 (office)
215-923-7390 (fax)
Allison.zibelli@jefferson.edu

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Abstract

Cancer treatment, while increasingly effective, has also become extremely expensive, with some newer agents costing hundreds of thousands of dollars per year. In contrast, food supports for needy patients are becoming scarcer. This problem of hunger is worsened by the increasing out-of-pocket costs faced by cancer patients. In the absence of effective governmental solutions to food insecurity, health systems should consider stepping in to make sure that expensive cancer treatments are not compromised by hunger.

My patient was a 67 year old woman with stage IV lung cancer who was not faring well. I had started her on nivolumab, a new immunotherapy, 6 weeks earlier, and she seemed to be tolerating it, but continued to lose weight. Weight loss is a worrisome sign that a cancer is not responding to treatment. Weren't we doing everything we could to help her get better, I asked? She looked down at the floor, and said in a quiet voice, "We don't have much food at my house". The cost for a single course of nivolumab is approximately $300,000, and yet my patient was failing because she could not afford to eat.

The cost of cancer care today is staggering, not only to payers, but to patients and insurers. Cancer treatments, including chemotherapy, immunotherapy, and targeted therapy, are showing great promise in extending lives, but the cost for these treatments continues to increase radically. For example, CAR-T therapy, an innovative treatment for hematologic malignancies, has given new hope to many patients with no other treatment options. Novartis plans to price this drug at 475,000 dollars per treatment, and total costs could increase to 1.5 million dollars per treatment because of the need for expensive drugs to treat side effects [1]. Many patients must shoulder some of this cost themselves; the typical patient with Medicare alone, which requires a 20% copay, would have to come up with $60,000 per treatment course for single-agent nivolumab.

At the same time, basic resources such as food are unaffordable for our patients, whether they are poor to start with, or because their illness makes them poorer, a concept known as financial toxicity. For example, half of all cancer patients receiving Medicare pay at least 10% of their income for cancer care. Patients cope with this expense by taking less medication than prescribed, not filling their prescriptions, or declaring bankruptcy [2].

This financial struggle often leads to hunger. Approximately 15% of US households were food insecure at some time during 2013 [3], but cancer patients may have it even worse. A large study of cancer patients at an inner-city cancer center found that more than 70% had some degree of food insecurity, with 76% reporting that the cost of cancer treatment led to less money for food. 26% of these patients specifically cited the cost of cancer medications as a factor in their inability to purchase sufficient food [4].

The impact of food insecurity on the survival rates of cancer patients has been poorly studied. The few studies that have reported survival rates for cancer patients undergoing nutritional interventions have focused on improving the diets of already food-secure individuals [5]. However, weight loss has been correlated with lower response rates to therapy and worse survival in cancer patients. This has led to recommendations for enteral and parenteral nutrition support for cancer patients, despite the expense and risk for nosocomial infections[6].

Providing food to patients during cancer treatment would seem to be easier and cheaper, however, the infrastructure is not currently in place. Emergency food pantries are not always the answer. Analysis of food pantries in a large metropolitan area showed significant gaps in services [7]. Barriers included limited

hours, residency requirements, and limits to quantities of food available. In addition, cancer patients often have very specific nutritional needs that cannot be met by food pantries, which by necessity have limited availability of specific foods.

Government safety nets often fall short as well. The Supplemental Nutrition Assistance Program (SNAP) is the main US government food support program. In a recent survey, participants reported that SNAP helped to buy enough food to get by [8]. However, participants stated that the amount of the benefit was too small, and they supported efforts to provide additional money to buy healthy foods. However, SNAP benefits are limited to a 3-month period for adults without children who aren't receiving disability in many states [9]. In addition, many states impose a limit on how much cash a patient can have, which will further hamper the patient's ability to pay for their care. This situation is likely to worsen, as the current administration has proposed a 2018 budget that cuts SNAP by 29%[10] .

Food prescriptions are a novel approach to improving the health outcomes of patients with chronic diseases. One such program, FoodRx, is a partnership between a university, a large retail pharmacy, and six health centers. [11] The program provides food coupons that can be redeemed at local farmer's markets and for healthy food options such as milk, low fat meats, vegetables, and bread at local stores. The coupons were offered to people who answered yes when they were asked if they had trouble affording food. This program was an example of how health systems could partner with for-profit and academic centers to lessen food insecurity. Although this program was targeted towards patients with diabetes, it could be equally useful for patients who are undergoing active cancer treatment.

It seems strange to be spending hundreds of thousands on cancer treatment for a single patient when many of these patients do not have enough to eat. We would not give a patient a vial of insulin without the needles to inject it. Putting a patient through the intensity of cancer treatment without access to healthy food is currently the norm, however. It will take partnerships between health systems, payers, patients and industry to change this situation. Some may argue that it is not the health system's role to provide food to patients. However, patients cannot heal from cancer without good nutrition. If we cannot help our hungry patients to eat, our million-dollar treatments will be money wasted.

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For reprints: Allison Zibelli, MD, 925 Chestnut St. Suite 220A, Philadelphia, PA 19107