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With colorectal cancer treatment, physical toxicity is not the only concern

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One of us recently treated a patient (let's call him Carl) with localized rectal cancer who was started on standard, neoadjuvant chemoradiation with capecitabine. He did very well with treatment in terms of his degree of physical toxicity, completing the treatment without any side effects at all. Unfortunately, after completion of this course of therapy, Carl's cancer was found to have progressed. We discussed this finding with him, and started describing options for combination first-line therapy, including capecitabine, oxaliplatin, and bevacizumab. In the midst of that discussion, Carl shook his head and said, "Doc, I don't think I can take that regimen." Carl stated he was not concerned about the physical toxicity of the treatment; rather, he was concerned about the financial toxicity. Despite having insurance, he revealed he had to pay fully out-of-pocket for the capecitabine since he did not have any prescription drug coverage. As a result, he had amassed thousands of dollars in medical debt over the course of a few weeks. Because he assumed he had no other option, Carl had never revealed his financial toxicity to his healthcare team, and more importantly, we had not inquired about his ability to afford his care. Yet, he is not alone in experiencing this degree of treatment-related financial burden. Financial toxicity is increasingly recognized as a key determinant of quality of cancer care. Studies suggest that 42% of patients experience a catastrophic, subjective, financial burden as a result of their cancer diagnosis.[1] Sharp et al add to this literature by highlighting the financial impact specifically related to colorectal cancer treatment, and by evaluating both the subjective (financial strain) and objective (financial stress) impact of economic burden on cancer in association with health-related quality of life (HRQoL).

Sharp et al showed that among colorectal cancer survivors, 41% reported cancer-related financial stress, 39% reported financial strain, and 32% reported both stress and strain. These findings highlight how both tangible and intangible financial concerns play a significant role in our patients' lives. Other studies have highlighted the objective (financial stress) or subjective (financial strain) though most have not examined both; this study highlights how both are important to consider. For instance, cancer patients are 2.7 times more likely to declare personal bankruptcy (an example of financial stress) in Washington state than those without cancer.[2] Additionally, those cancer patients who declared personal bankruptcy were at significantly higher risk of mortality compared to those who did not

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declare bankruptcy.[3] Further, in a cross-sectional study, financial distress (example of financial strain) was more severe than physical stress, social stress, family stress and emotional distress.[4]

Understanding the financial impact of cancer treatment is of utmost importance as both financial strain and financial stress could harm outcomes in colorectal cancer survivors. Sharp et al. show that the odds ratio of reporting low HRQoL was significantly higher in patient who reported cancer-related financial stress, financial strain, and who experienced both, suggesting that quality of life can be impacted by both of these factors. This is not the first study to examine outcomes in relation to cost of care for colorectal cancer survivors. For example, Shankaran et al found that among patients diagnosed with stage III colon cancer, 38% reported treatment-related financial hardship.[5] Veenstra et al found that nearly 40% of colorectal cancer patients receiving adjuvant therapy had to use their savings to make ends meet.[6]

One important limitation to the study, however, is difficulty in generalizability. Per the article, Ireland's health care system is notable in that it includes both a complex public and private health care system. Interestingly, neither public or private insurance cover prescription medications. Instead, individuals electively join the Drug Payment Scheme with a ceiling of €20 per month for prescription drugs and certain aids. Thus, these results may be difficult to generalize in that prescription medications can be a significant burden of cost in other countries.[1] Further, while the authors point out that the prevalence of financial stress was higher in those without private insurance, and the prevalence of both stress and strain was higher in those without a medical card, there was no further analysis, and they did not examine how HRQoL was impacted by these variances. Insurance status can certainly play a large role on financial impact, thus this would have been helpful. For instance, in the United States, patients with cancer who have Medicare alone without any supplemental insurance incur mean out-of-pocket costs that comprise 24% of their household income.[7]

That being said, Sharp et. al add to the growing body of literature that suggests the financial component of cancer care is clinically relevant for patients and should be considered an important aspect of their treatment. Yet, an important question remains incompletely answered: how can we help reduce our patients' financial toxicity? We can look to both long- and short-term interventions.[8] Long-term interventions to reduce toxicity should focus in changes to health policy directed towards the pharmaceutical industry, payers, and the government. Innovation in drug development should go hand-in-hand with innovation in drug pricing, including value-based or outcomes-based pricing. Novel health benefit design could reduce costs, as well. For example, value-based insurance might reduce out-of-pocket costs for high-value interventions. And the government has a clear role to play in reducing prices, by allowing price negotiations with manufacturers.

Until these long-term policy solutions are instituted, we have a responsibility in clinic to consider short-term interventions to reduce patients' financial toxicity. Those interventions include having detailed goals of care discussions with our patients so they are well-informed of the benefits and harms (both physical and financial) of any treatment. Additionally, while prices are often opaque at the time oncologists prescribe chemotherapy, checking in with

patients frequently to assess whether they can afford treatment is critical. Doing so might allow patients like Carl to be directed to financial resources before they have accrued insurmountable medical debt. Research should now focus on interventions like these to reduce patients' financial burden, thereby increasing their quality of life, financial well-being, and adherence to treatment.

References

1. Zafar SY, Peppercorn JM, Schrag D, et al. The financial toxicity of cancer treatment: a pilot study assessing out-of-pocket expenses and the insured cancer patient's experience. *Oncologist*. 2013; 18:381–390. <https://doi.org/10.1634/theoncologist.2012-0279>. PMID:23442307. [PubMed: 23442307]
2. Ramsey S, Blough D, Kirchhoff A, et al. Washington State cancer patients found to be at greater risk for bankruptcy than people without a cancer diagnosis. *Health Aff (Millwood)*. 2013; 32:1143–1152. <https://doi.org/10.1377/hlthaff.2012.1263>. PMID:23676531. [PubMed: 23676531]
3. Ramsey SD, Bansal A, Fedorenko CR, et al. Financial insolvency as a risk factor for early mortality among patients with cancer. *J Clin Oncol*. 2016; 34:980–986. <https://doi.org/10.1200/JCO.2015.64.6620>. PMID:26811521. [PubMed: 26811521]
4. Delgado-Guay M, Ferrer J, Rieber AG, et al. Financial distress and its associations with physical and emotional symptoms and quality of life among advanced cancer patients. *Oncologist*. 2015; 20:1092–1098. <https://doi.org/10.1634/theoncologist.2015-0026>. PMID:26205738. [PubMed: 26205738]
5. Shankaran V, Jolly S, Blough D, Ramsey SD. Risk factors for financial hardship in patients receiving adjuvant chemotherapy for colon cancer: a population-based exploratory analysis. *J Clin Oncol*. 2012; 30:1608–1614. <https://doi.org/10.1200/JCO.2011.37.9511>. PMID:22412136. [PubMed: 22412136]
6. Veenstra CM, Regenbogen SE, Hawley ST, et al. A composite measure of personal financial burden among patients with stage III colorectal cancer. *Med Care*. 2014; 52:957–962. <https://doi.org/10.1097/MLR.0000000000000241>. PMID:25304021. [PubMed: 25304021]
7. Narang AK, Nicholas LH. Out-of-Pocket Spending and financial burden among medicare beneficiaries with cancer. *JAMA Oncol*. 2017; 3:757–765. [PubMed: 27893028]
8. Zafar SY. Financial toxicity of cancer care: it's time to intervene. *J Natl Cancer Inst*. 2015; 108:djv370. <https://doi.org/10.1093/jnci/djv370>. [PubMed: 26657334]