Additional studies with large sample size are encouraged to identify the individual risk for disease recurrence and to offer guidance for therapeutic decisions.

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AUTHORS' DISCLOSURES OF POTENTIAL CONFLICTS OF INTEREST
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Financial Incentives in Cancer Care and Impact on Prescribing Practice

To the Editor: With the rising cost of cancer care increasingly threatening the accessibility of optimal therapy for our patients, the article by Malin et al[1] is timely. They report significant awareness among North American oncologists of financial incentives for increased administration of chemotherapy and growth factors; the implication is that this knowledge will unduly bias practice toward approaches that generate the most financial return for the clinician. The obvious consequence is unnecessary expense, but patient care could potentially be compromised through incentives that encourage the use of an inferior therapy and/or the addition of unnecessary treatment(s). We believe that recent data from Australia inform this discussion.

In Australian practice, patients are either managed in government-funded public hospitals by clinicians who receive a fixed salary, or in private hospitals, where clinicians receive payment for patient consultations and for intravenous chemotherapy administration. A prescription for an oral therapy, such as capecitabine, in a public hospital has no impact on clinician salary and has the potential benefit of freeing up chairs in a crowded chemotherapy ward for patients who require intravenous therapy. In contrast, a prescription for capecitabine as an alternative to fluorouracil in a private hospital, where capacity is less of an issue, means loss of intravenous therapy–related payments, which over several months translates to a substantial amount of money. In both instances, the clinician is responsible for managing any adverse events, and all drugs are supplied via the government-sponsored pharmaceutical benefits scheme, with no sale of chemotherapy by the clinician.

Since July 2009, we have been collecting prospective data on the treatment of consecutive patients with metastatic colorectal cancer across eight private and six public hospitals in Australia.[2] Patient demographics are quite similar for patients in private versus public settings: median age is 70.1 years versus 67.3 years ($P = .0179$); 41.3% versus 38.5% of patients have an Eastern Cooperative Oncology Group performance status of 0 ($P = .4399$); and 58.3% versus 61.0% have a Charlson comorbidity score of 0 ($P = .4402$). As shown in Table 1, the prescribing practice for first-line chemotherapy for patients in private and public hospitals, including the percentage of patients receiving capecitabine versus fluorouracil, is indistinguishable. So, for private clinicians who are making a choice between two therapies with similar outcomes, where there is a clear and measurable incentive to prescribe the intravenous option, practice is indistinguishable from the public system, where no financial incentives are in place.

Table 1. First-Line Chemotherapy Treatment Received by Patients With Metastatic Colorectal Cancer, Comparing Patients Treated in Private Versus Public Hospitals in Australia

	Private Hospital (n = 405)		Public Hospital (n = 281)		
	No.	%	No.	%	*P*
Capecitabine	42	10.4	28	10.0	.9626
Fluorouracil	41	10.1	30	10.7	
Combination chemotherapy	322	79.5	223	79.4	

It would be naive to think that medical oncologists are immune to the attraction of financial incentives that affect their practice. However, we would argue that there are a multitude of other factors that drive the use of expensive new therapies, some of which are specific to individual health care systems, but many of which are universal issues. The considerable investment in advertising and sponsorship by the pharmaceutical industry indicates that they believe such promotion will substantially affect prescribing practice[3]; this is of particular relevance given that the newest therapies will be the most heavily promoted and, almost inevitably, are the most expensive. Also, understandable excitement on the part of the patient (and clinician) is associated with new treatment options, particularly when these are targeted therapies, and this can appear in stark contrast to

the almost universal negative perceptions of chemotherapy. The impact of direct-to-consumer advertising is unknown,[4] but patients would presumably be attracted by the concept of supportive care options (such as growth factors) that promise reduced toxicity, even if the evidence does not support this. Finally, the strong social media presence of pharmaceutical companies[5] highlights the emerging role of new Web-based technologies as a marketing strategy that targets patients and clinicians.

Our data strongly suggest that medical oncologists in Australia are not necessarily motivated by financial gain to the extent that the treatment received by patients is affected. The extent to which our results can be generalized is unknown, but we would argue that the many factors affecting therapy received do each need to be considered before concluding any direct link between financial incentives and changed clinical practice. Ultimately, although oncologists need to be cognizant of the rising costs of health care, it is critical that we as clinicians are allowed to provide the best possible care for our patients and are not made to feel guilty for prescribing expensive therapies when these are the best option.

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Long-Term Results of Autologous Hematopoietic Stem-Cell Transplantation After High-Dose ^{90}Y-Ibritumomab Tiuxetan for Patients With Poor-Risk Non-Hodgkin Lymphoma Not Eligible for High-Dose BEAM

To the Editor: The purpose of this correspondence is to provide a 5-year update of our previously published trial with high-dose yttrium 90 (^{90}Y) –ibritumomab tiuxetan conditioning regimen in order to definitively confirm our preliminary results.[1] High-dose chemotherapy and autologous hematopietic stem-cell transplantation (ASCT) is standard procedure for poor-risk non-Hodgkin lymphoma (NHL), but a significant proportion of patients will never be considered for this approach because of age or comorbidities. Therefore, innovative conditioning regimens are required to improve remission duration and survival in patients not eligible for ASCT. ^{90}Y-ibritumomab tiuxetan is an effective radiolabeled monoclonal antibody in the treatment of NHLs,[1-8] and its favorable toxicity profile makes it a good candidate for dose escalation with stem-cell support or in combination with carmustine, etoposide, cytarabine, and melphalan (BEAM).[9-11] As previously reported, the use of ^{90}Y-ibritumomab tiuxetan at twice to triple (0.8 to 1.2 mCi/kg) the standard dose in the conditioning setting is safe and successful.[1] The innovative feature of our study was split infusion of stem cells aimed at shortening the duration of the severe pancytopenia subsequent to myeloablation (Fig A1, online only). High-dose ^{90}Y-ibritumomab tiuxetan was used as consolidation therapy after an optimal cytoreduction.

Between December 2003 and July 2008, 60 patients with poor-risk CD20-positive NHL who were not eligible for BEAM were enrolled. Main inclusion criteria were diagnosis of relapsed or refractory CD20-positive NHL or a new diagnosis of poor-risk NHL and ineligibility for standard conditioning regimens. No upper age limit was established. Poor-risk NHL was defined as aggressive NHL with International Prognostic Index $\geq$ 3, mantle cell lymphoma (MCL), and transformed NHL. Main patient characteristics are reported in Appendix Table A1 (online only).

Patients were treated with rituximab-containing high-dose sequential chemotherapy followed by myeloablative ^{90}Y-ibritumomab tiuxetan (Z-HDS) and autologous peripheral blood stem-cell (PBSC) transplantation. Disease response was assessed according to Cheson criteria.[12] The study protocol was approved by the institutional review board and ethical committee.

