gent on access to such information.

Robert Myers, T.J. Muckle, Peter Willard and Brian Higgins would prefer that our results be attributed to differences in patient characteristics. We adjusted for the differences between the patient populations using statistical analysis, which increased the difference in survival from an overall relative risk of 0.67 (95% confidence interval [CI] 0.53–1.03) to an adjusted relative risk of 0.47 (95% CI 0.23–0.96) for women with tumours less than or equal to 20 mm in diameter. Unfortunately, the manner in which the tumour was detected was not routinely recorded by clinicians.

As Myers notes, information about tumour grade was more likely to be missing for women seen in community hospitals. These women experienced poorer survival than women with moderate-grade tumours. Conversely, information about estrogen receptor status was more likely to be missing for women seen at teaching hospitals, and these women experienced better survival than those with positive tumours. This could be viewed as a source of misclassification of patients or as an indicator of differences in the process of care. In either case, we believe it is important to examine the relationship with outcomes, as well as reasons for such potential differences in processes of care.

The study by Golledge and colleagues was a single-hospital study that looked at outcomes before and after introduction of specialization.[2] It did not, and could not by design, comment on impact of teaching status. Other British studies that have defined specialization in terms of teaching hospital status,[3] surgeon's workload[4] and local perception[5] have also found differences in survival. It is perhaps premature to conclude which aspect of specialization contributes to differences in outcome.

Robert Fingerote takes exception to wording in the introduction of the article and suggests that the study is biased. In fact, we were very careful to maintain a balanced approach in discussing possible interpretations of our results. It is our view that our article's wording is far more balanced than that of our correspondents.

Breast cancer treatment occurs within a complex system involving radiologists, surgeons, radiation and medical oncologists, pathologists and nurses, among others. We considered the initial treatment setting (a system of care) rather than the skills of individual clinicians. If the difference in survival that we observed can be attributed to differences in the process of care, we need to determine which element of the care provided at teaching hospitals is responsible for the differences and whether it can be applied to the community setting, particularly since the majority of women are initially seen at community hospitals.

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## Raloxifene: handle with care

We have seen some women at high risk for breast cancer taking the selective estrogen receptor modulator raloxifene, in the belief that it is a breast cancer "preventive" with few of the risks or side effects of tamoxifen. Raloxifene is, in fact, not approved in North America for breast cancer prevention. Furthermore, perhaps because raloxifene has become available more recently, women, and sometimes physicians, do not seem to be aware that the risks of developing deep venous thrombosis, pulmonary emboli and hot flashes are similar to those seen with tamoxifen.[1]

We have also observed the frequent use of raloxifene by women who have completed the recommended 5-year course of adjuvant therapy with tamoxifen following a diagnosis of breast cancer. In randomized trials, there were more recurrences of breast cancer and more deaths in women who received adjuvant therapy with tamoxifen for 10 or more years than in those who received tamoxifen for 5 years.[2] This may be explained by the observation in animal and in vitro models that cells grown for long periods in the presence of tamoxifen can become dependent on it.[3]

Because raloxifene is very similar to tamoxifen, the prescription of raloxifene to a patient with residual tamoxifen-dependent breast cancer cells could promote the growth of such a cancer. In fact, it has recently been demonstrated in animal models that tamoxifen-dependent breast cancer cells can be stimulated by raloxifene.[4] Thus, physicians should be particularly concerned about the prescription of raloxifene in this situation.

If patients can develop tamoxifen-dependent breast cancers after protracted periods of therapy, perhaps women with a previous diagnosis of breast cancer who have not been treated with tamoxifen but who are treated with raloxifene for osteoporosis may develop raloxifene-dependent tumours. There are few safety data on the use of raloxifene in women with a previous diagnosis of breast cancer.[5,6]

In summary, raloxifene is not currently indicated for breast cancer prevention; it should not be prescribed as a substitute for tamoxifen as adjuvant therapy for breast cancer; it should not be prescribed to women who have completed 5 years of tamoxifen as adjuvant therapy for breast cancer; and the prescription of raloxifene to prevent or treat osteoporosis in women with a pre-

vious history of breast cancer who have not received tamoxifen or who have received it for less than 5 years should be considered only with caution and after discussion with the patient's medical oncologist. Alternative approaches to treat or prevent osteoporosis in women with a previous diagnosis of breast cancer include therapy with bisphosphonates, calcitonin and calcium supplements, diet modifications and exercise.

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## Nonclinical factors in patient selection for surgery

Mita Giacomini and colleagues have skillfully captured the important role that nonclinical factors play in selecting patients for cardiac procedures.[1] Anyone who has managed a waiting list knows that personal opinions, even among health care professionals, vary widely on the use of parameters such as age and occupational status in determining priority.

Members of the medical profession can arguably reach a consensus on the clinical factors that will be used to assign priority to patients, but where nonclinical factors are concerned any shift from a first-come, first-served system must involve all potential stakeholders. Besides, patients' opinions are in some cases surprisingly generous, as demonstrated by a recent study in which elderly respondents reported that they were willing to give up their place on a heart-surgery waiting list to another patient, simply because the latter was younger or self employed.[2]

However, great caution should be used when considering public attitudes in setting criteria for patient selection. Giving informed consent to violate one's own rights, thereby exposing oneself to potential harm, is not wholly acceptable.

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## Lifestyle drugs

I congratulate Joel Lexchin on his well-informed and thoughtful analysis of issues relating to lifestyle drugs.[1] Producing a medical definition for "problems for living" and establishing boundaries for treatment represent major challenges. Many conditions uncomfortably straddle the medical–biological and environmental–social domains. Contemporary North American psychiatry, armed with a powerful tool in its *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV),[2] presents a number of examples.

Under the banner of attention-deficit/hyperactivity disorder, the medical community has shown an ever-increasing tendency to use medications to "normalize" children whose behavioural and learning difficulties may, in an unknown proportion of cases, have as much to do with prevailing expectations and the resources available to today's families and schools as to neurobiology.[3] Similarly, we increasingly use selective serotonin reuptake inhibitors to treat adults whose minor depressions and dysphoric moods may be as attributable to the subtle yet relentless pressures that are part of life in contemporary industrialized societies as to biological dysfunction.

Physicians who unquestioningly adhere to models of biological causation and medical treatment may be complicit in suppressing the need to question the effects of social and economic structures and values on people and may unwittingly obstruct needed social change.[4]

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