

Canadian Association of General Surgeons and American College of Surgeons Evidence Based Reviews in Surgery. 19.

The effect of a decision aid on knowledge and treatment decision making for breast cancer

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CAGS Evidence Based Reviews in Surgery

The term “evidence-based medicine” was first coined by Sackett and colleagues as “the conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients.”¹ The key to practising evidence-based medicine is applying the best current knowledge to decisions in individual patients. Medical knowledge is continually and rapidly expanding, and it is impossible for an individual clinician to read all the medical literature. For clinicians to practise evidence-based medicine, they must have the skills to read and interpret the medical literature, so that they can determine the validity, reliability, credibility and utility of individual articles. These skills are known as critical appraisal skills. Generally, critical appraisal requires that clinicians have some knowledge of biostatistics, clinical epidemiology, decision analysis and economics, as well as clinical knowledge.

The Canadian Association of General Surgeons and the American College of Surgeons jointly sponsor a program entitled “Evidence Based Reviews in Surgery (EBRS),” which is supported by an educational grant from ETHICON and ETHICON ENDO SURGERY, both units of Johnson & Johnson Medical Products, a division of Johnson & Johnson, and ETHICON INC. and ETHICON ENDO-SURGERY, INC. divisions of Johnson & Johnson Inc. The primary objective of this initiative is to help practising surgeons improve their critical appraisal skills. During the academic year, 8 clinical articles are chosen for review and discussion. They are selected not only for their clinical relevance to general surgeons but also because they cover a spectrum of issues important to surgeons; for example, causation or risk factors for disease, natural history or prognosis of disease, how to quantify disease (measurement issues), diagnostic tests and the early diagnosis of disease and the effectiveness of treatment. A methodological article is supplied that guides the reader in critical appraisal of the clinical article. Both methodological and clinical reviews of the article are performed by experts in the relevant areas and posted on the EBRS Web site. As well, a listserv discussion is held where participants can discuss the monthly article. Members of the Canadian Association of General Surgeons and the American College of Surgeons can access Evidence Based Reviews in Surgery through the Canadian Association of General Surgeons Web site (www.cags-accg.ca) or the American College of Surgeons Web site (www.facs.org). All journal articles and reviews are available electronically through the EBRS Web site. We also have a library of past articles and reviews that can be accessed at any time. Surgeons who participate in the monthly packages can obtain Royal College of Physicians and Surgeons of Canada Maintenance of Certification credits and/or continuing medical education credits for the current article only by reading the monthly articles, participating in the listserv discussion, completing the monthly online evaluation and answering the online multiple choice questionnaire. For further information about EBRS, the reader is directed to the CAGS or ACS Web site or should email the administrator, Marg McKenzie, at mmckenzie@mtsinai.on.ca.

In addition to making the reviews available through the CAGS and ACS Web sites, 4 of the reviews are published in condensed versions in the *Canadian Journal of Surgery* and 4 in the *Journal of the American College of Surgeons* each year. We hope readers will find EBRS useful in improving their critical appraisal skills and also in keeping abreast of new developments in general surgery. Comments regarding EBRS may also be directed to mmckenzie@mtsinai.on.ca.

Reference

1. Evidence-Based Medicine Working Group. Evidence-based medicine. *JAMA* 1992;268:2420-5.

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Selected article

Whelan T, Levine M, Willan A, et al. Effect of a decision aid on knowledge and treatment decision making for breast cancer surgery: a randomized trial. *JAMA* 2004; 292(4):435–41.

Abstract

Question: What is the impact of a decision aid outlining the different surgical options for stage I or stage II breast cancer on patient decision making? **Design:** Cluster randomized controlled trial. **Setting:** Twenty surgeons from communities in central-west and eastern Ontario. **Patients:** A total of 201 of 208 patients (97%) with newly diagnosed clinical stage I or stage II breast cancer agreed to participate in the trial. Of these women, 94 were randomized to the decision aid group and 107 to usual standard of care. **Intervention:** Patients assigned to the decision aid group were shown a decision board that presented information, including acute and long-term adverse effects associated with treatment and the effects of treatment on a patient's breast, long-term survival and quality of life, for the different treatment options. As well, patients were able to express a preference for treatment. **Main outcome measures:** (1) Patient knowledge about surgical treatment of breast cancer, (2) decisional conflict, (3) satisfaction with decision making and (4) treatment decision after the consultation. **Results:** Patients in the decision aid group had higher knowledge scores about their treatment options (66.9 v. 58.7; $p < 0.001$), had less decisional conflict (1.40 v. 1.62; $p = 0.02$) and were more satisfied with decision making (4.50 v. 4.32; $p = 0.05$). Patients who used the decision board were more likely to choose breast conservation therapy (BCT) (94% v. 76%, $p = 0.03$). **Conclusions:** The decision aid was helpful in improving communication and patient knowledge. The use

of the decision aid resulted in less decisional conflict and better patient satisfaction with their treatment decision.

Commentary

Decision aids are widely used in medicine to provide information to patients beyond what practising physicians provide in routine care. Decision aids should inform patients about their relevant treatment options and expected outcomes to help patients decide what treatment is best for them. Their objective is both to inform patients and to make them more comfortable with the treatment they have chosen. Decision aids take many forms, including printed material; video or audiotapes; graphic material; and more recently, interactive computer-based tools.

In this review, we looked at the use of a decision aid to help patients understand their treatment options in breast cancer. The author, Dr. Timothy Whelan, has published extensively in the area of decision aids. This paper reports a randomized controlled trial (RCT) comparing the use of a decision aid with a standard surgical consultation to assist patients in deciding which type of breast surgery they want (BCT v. mastectomy).

In reviewing this paper, we must first decide whether a decision aid is really necessary. The 2 common treatment options offered to women with breast cancer are mastectomy without adjuvant radiation and lumpectomy followed by breast radiation treatment. Because there are 2 distinct options of therapy and because of the important psychological issues associated with both breast cancer and mastectomy, we believe that it could be very useful to have a decision aid to help patients. Despite good evidence that survival is the same for both treatment options, many patients still believe that more aggressive surgery offers the best chance at cure. Also, it has been re-

ported that upwards of 30% of women with breast cancer do not receive appropriate counselling regarding treatment choices.¹ Finally, patients are often overwhelmed after an initial surgical consultation for breast cancer and might be helped by simple tools that reinforce the surgeon's message.

The decision aid used, although not actually shown in the paper, is a simple board showing the 2 treatment options (mastectomy and lumpectomy/irradiation), the side effects of therapy and the results of therapy both in terms of recurrence and overall survival. The board also mentions the option of immediate breast reconstruction after mastectomy and the expected therapy after local recurrence in patients after mastectomy or lumpectomy and radiation. We believe that the options shown are adequate but do not include newer techniques, such as sentinel node biopsy. This underscores the importance of updating decision aids as treatment evolves. Although the decision aid used is a board, it could easily be modified for computer use, which would allow for ongoing modification.

It is not enough to use a decision aid and survey patients about their satisfaction with the tool. We must compare it with standard care and objectively measure its effect. This study assessed the value of a decision aid on patient knowledge, decisional conflict, satisfaction with decision making and the treatment decision following the consultation. In Whelan's paper, the authors used a cluster type study design that randomly assigned surgeons to the study group, using the decision aid or the control group in which a routine surgical consultation was done. Surgeons were age- and sex-matched to control for potential biases, and surgeons in the study group were coached in the use of the decision aid. All patients referred to the same surgeon received the same intervention, hence the term "cluster randomized controlled trial."

To measure the benefits of using the decision aid, the authors measured patient knowledge, decisional conflict, satisfaction with the decision made and actual treatment chosen in both groups. Patients completed various validated questionnaires, such as an anxiety index and a depression scale, after the initial consultation and at 6 and 12 months after surgery. Patient knowledge was tested with a 44-item questionnaire developed and validated by the authors.

The authors found that patients in whom the decision board was used at the initial consultation had higher levels of knowledge about breast cancer, especially with regard to the survival equivalence between mastectomy and lumpectomy/irradiation. They also had lower levels of decisional conflict and higher levels of satisfaction with their decision immediately after the consultation. There were no significant differences in conflict and satisfaction, however, when the assessment was completed 6 and 12 months after surgery. Patients using

the decision board were significantly more likely to choose breast conservation therapies than those who had a standard surgical consultation (94% v. 76%). There was no evidence of depression in either group according to the various outcome measures and no difference in anxiety levels.

The authors concluded that the decision aid is a useful tool and provides significant improvements in patient knowledge, decreases in decisional conflict and increases in satisfaction with their decision. Because the study was a well-designed RCT, we would agree with the conclusions. We have mixed opinions about the use of the decision aid in practice, however. The benefit of the decision board is short-lived, with equal levels of satisfaction at 6 and 12 months after surgery in both groups. The very high rate of breast conservation in the study group is higher than that seen in many practices. The authors were not looking for an optimal rate of breast conservation, however, so no more can be said about this result.

In cancer centres that already have extensive patient teaching and support programs, we are not sure the decision aid will add much to the care provided, but there is no reason that it could not be used by nurse specialists as part of their teaching in the cancer clinic setting. It may be most useful as tested in surgical practices without such extensive backup. Perhaps the benefit of the aid stems more from teaching surgeons communication skills than from the aid itself. However, we agree that any tool that ultimately results in well-informed patients who are content with their treatment choice is welcome in the rapidly changing field of breast oncology.

Competing interests: None declared.

Reference

1. Clauson J, Hsieh YC, Acharya S, et al. Results of the Lynn Sage Second Opinion Program for Local Therapy in Patients with Breast Carcinoma. *Cancer* 2002;94: 889-94.

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