

Short communication

Decision making in local therapy for breast cancer

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Shared decision making has been accepted as a desirable approach to medical care, but our understanding of patient satisfaction with the process and its impact on treatment selection is limited. The local therapy of breast cancer is an ideal model for studying the decision-making process because there is a large body of high-quality evidence on which to base decisions. To study decision making, we used a population-based sample of all women with ductal carcinoma *in situ* (DCIS) and a 20% sample of those with invasive breast cancer diagnosed in 2002 and reported to the Los Angeles and Detroit Surveillance, Epidemiology, and End Results registries. There was a 77% response rate to the survey, yielding 1,884 patients. More than 90% were contacted within 6 months of diagnosis [1].

The mean patient age was 60 years and 70% were white. Less than a high school level of education was reported by 27%; 61% graduated from high school or had some college education, and 13% were college graduates. The mastectomy rate was 30% for patients with both DCIS and invasive cancer. Accepted clinical contraindications to breast-conserving surgery were reported by 11.5% of the study population. In 41% of cases the patient reported that she was the primary decision maker, the decision was shared in 37%, and was made by the surgeon in 22% of cases. The therapy recommended by the surgeon was breast-conserving surgery in 49%, mastectomy in 15%, and patients reported being offered a choice between the two procedures in 37% of cases. Greater patient involvement in the decision-making process was significantly correlated with treatment by mastectomy after adjustment for multiple clinical and demographic variables. Only 5.8% of women whose surgeon made the treatment decision had a mastectomy, as compared with 16.8% who reported a shared decision and 27% of women who reported that they made the decision ($P = 0.003$).

Concern about disease recurrence was the most influential factor in treatment choice, with 40% of women reporting that their treatment choice was greatly influenced by this concern. Concerns about disease recurrence were strongly associated

with receipt of mastectomy; 52% of women who were greatly concerned about disease recurrence received a mastectomy, as compared with 19% of those who were not influenced, or only slightly influenced, by this concern ($P < 0.001$) [1].

Patients expressed a high level of confidence in decision making, with more than 80% of women of all ages being very or extremely confident about their treatment choice. However, fewer than 50% were able to answer correctly a true-false question about the lack of a survival difference after treatment by mastectomy or lumpectomy and radiation.

We also examined the match between decision control and patient preference in a subset of 1,028 patients with no contraindications to breast-conserving therapy who were treated by 270 surgeons [2]. We found a rate of mismatch between desired and actual level of involvement of 31%. In 20% of cases actual involvement in decision making was greater than preferred, whereas in 11% it was less than preferred. Twenty per cent of patients reported that they asked for but did not receive a treatment recommendation, and 16% noted that they did not ask for but received a treatment recommendation. Patients who perceived too little involvement in the decision-making process were younger, reported that only one treatment option (mastectomy or breast conservation) was discussed, and were more likely to have been seen by a high-volume surgeon. Patients who perceived too much involvement in decision making had lower levels of education and felt that they asked for but did not receive a treatment recommendation. Lack of satisfaction with the decision-making process was expressed by 37%, lack of satisfaction with the relationship with the surgeon by 23%, and lack of satisfaction with communication with the surgeon by 24% of patients [3]. Satisfaction with the decision-making process did not correlate with surgeon sex, years in practice, or treatment in a cancer centre. Increased satisfaction with decision making was significantly associated with high-volume breast surgeons, and a trend toward increased satisfaction with higher breast surgery volume was observed for other aspects of the treatment selection process.

The results of these studies suggest that although patients believe that they are informed about their treatment choices and are confident in their decisions, major knowledge gaps exist. In addition, for a significant number of patients there is a mismatch between the preferred level of involvement in decision making and what actually occurs. As in the treatment of breast cancer, the style of decision making must be tailored to the individual.

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