

BACKGROUND

Patient reported outcomes have become an important tool in evaluating patient satisfaction with surgical treatment¹. The BREAST-Q reconstruction module assesses the appearance and function of the reconstructed breast. This survey contains 25 questions and takes 10-14 minutes to complete. While extensively validated, the BREAST-Q can be cumbersome and time-consuming, which may contribute to survey fatigue. Thus, the performance characteristics of shorter survey tools are being evaluated to determine if they accurately measure patient reported outcomes. For example, the SANE scoring system is a survey tool containing one question asking patients to rate the function of an affected body part on a scale from 0 to 100. The SANE scoring system has historically been utilized in the field of orthopedics; however, there are no reports of the SANE score being used to measure patient outcomes after breast reconstruction.

OBJECTIVE

This study sought to compare results from the single score SANE surveys for post-operative chest appearance and function to the BREAST-Q breast reconstruction module for patients who underwent breast reconstruction after mastectomy.

REFERENCES

1. Tevis SE, James TA, Kuerer HM, Pusic AL, Yao KA, Merlino J, Dietz J. Patient-Reported Outcomes for Breast Cancer. Ann Surg Oncol. 2018 Oct;25(10):2839-2845.

2. Santosa KB, Qi J, Kim HM, Hamill JB, Wilkins EG, Pusic AL. Long-term Patient-Reported Outcomes in Postmastectomy Breast Reconstruction. JAMA Surg. 2018 Oct 1;153(10):891-899.

METHODS

Patients who underwent breast reconstruction from 2017-2020 were contacted via telephone. They were asked questions from the Post-Operative Breast Reconstruction Module of the Breast-Q Version 2.0. For the SANE survey, patients were asked “How would you rate the appearance and function of your breast today as a percentage of normal from 0 to 100, with 100% being normal?” for each breast. The primary outcome was the degree of correlation between BREAST-Q score and SANE score by Pearson correlation.

RESULTS

Two hundred and fifty-five patients were contacted, and a total of 91 patients completed the survey, yielding a 35.7% response rate. The average age was 54 years and average BMI 29.19. Forty-five percent of patients had chemotherapy, and 41.8% required radiation. There were no significant differences in patient characteristics between groups. For patients across the board, SANE scores for appearance appear to have a moderately positive correlation with BREAST-Q scores examining appearance, and SANE scores for function have a weakly positive correlation with BREAST-Q scores examining function (Table 1). On average, patients reported higher SANE scores for their native breasts than for their operated breasts (Table 2).

APPEARANCE				FUNCTION			
Mean SANE	Mean Breast-Q	R	p-value	Mean SANE	Mean Breast-Q	R	p-value
60.6 ± 28.0	61.4 ± 19.8	0.76	<0.001	74.7 ± 26.4	74.0 ± 21.5	0.532	<0.001

Table 1. Mean SANE scores, Breast-Q scores, and linear regression data for all patients.

Reconstruction Type	Side	APPEARANCE	FUNCTION
All unilateral patients	Operative	65.4 ± 24.3	74.4 ± 23.8
	Non-operative	91.5 ± 19.4	92.6 ± 18.4
Unilateral TE to implant	Operative	63.6 ± 29.8	82.1 ± 22.6
	Non-operative	95.4 ± 11.3	99.6 ± 1.4
Unilateral free flap	Operative	70.9 ± 17.5	77.9 ± 19.0
	Non-operative	96.6 ± 6.3	96.6 ± 8.8

Table 2. Average SANE scores obtained for patients who underwent unilateral reconstruction.

DISCUSSION

This one-question SANE survey appears to give us similar actionable information to a lengthy and invasive survey, and we believe it to be a valid method with which to measure satisfaction. Patients do appear to report lower satisfaction with their operated breasts than with their contralateral breast across all reconstruction types. In the future, the SANE survey could become a highly useful and convenient tool to examine breast satisfaction over time while undergoing tissue expansion. Additionally, it could allow us to more quickly compare patient satisfaction with different reconstruction types, such as autologous versus implant reconstruction. For example, our data grossly demonstrated that patients who underwent free flap reconstruction reported higher satisfaction with appearance than patients who underwent other methods of reconstruction. Findings from such patient reported outcomes can guide shared decision making between patients and their clinicians².