

16 Magseed Versus Wire Localisation: A Comparison of Breast Margin Re-excision Rates at One UK Centre

Jessie Lenton,¹ Emma Stewart-Parker,¹ Nga Nguyen,¹ Georgios Boustisikos,¹ Nadine Betambeau,¹ Dibyesh Banerjee,¹ Anup Sharma,¹ Sarah Tang¹

¹St. George's University Hospitals NHS Foundation Trust, London, UK

Background

The localization of impalpable breast lesions has historically been wire-guided. However, this is associated with such challenges as patient discomfort, wire migration, and restrictive scheduling. Magseed, which provides scheduling flexibility and improves patient comfort, has recently been adopted in our unit. Our study compares the efficacy of Magseed with the wire, with a particular focus on reexcision rates.

Methods

Data were collected retrospectively from 1 United Kingdom (UK) breast unit from consecutive cases over a 10-month period in 2021, from the start of Magseed adoption, comparing reexcision rates for Magseed-guided to wire-guided wide local excisions (WLE). Baseline data on body mass index (BMI), ethnicity, age, and previous breast procedures were recorded. The other outcomes were breast quadrant, localization technique, largest tumor size on all imaging modalities, histology size, core biopsy, and final histology. Locally, American Society of Clinical Oncology margin guidelines are followed: no ink on tumor for invasive disease, 2-mm clearance for ductal carcinoma in situ.

Results

We identified 62 patients (63 breasts) in the Magseed group and 50 patients (52 breasts) in the wire group. The median age in the Magseed group was 59 years (range, 28-89) and the median BMI was 28.23 (range, 19.10-59.40), vs median age of 61 years (range, 37-92) and median BMI 27.85 (range, 18.50-43.50) for the wire group.

The median size on imaging for the Magseed group was 17 mm (range, 0-54), vs 12.5 mm (range, 0-67) for the wire group. On final histology, the median size in Magseed cases was 21 mm (range, 0-82) vs 17 mm (range, 0-68.8) for wire cases. There was a significant difference between largest size on imaging and final histology size in both groups (Magseed, $P = .034$; wire, $P = .028$). The median histology size in reexcision cases in the Magseed group was 40 mm (range, 17-82) vs 26.75 mm (range, 17-58) in the wire group.

The overall reexcision rate in the Magseed group was 14.5% (9/63), compared with 15.4% (8/52) in the wire group.

Conclusions

Our data show similar reexcision rates when comparing Magseed with the traditional wire-guided localization. The significant difference between size on imaging and histology has implications for reexcision rates and therefore additional work is required to improve the preoperative estimation of cancer size and address this discrepancy. A reduction in reexcision rates may also be improved over time as operators move up the learning curve and become more experienced with Magseed. Our data reflect "snapshot" early results, and we therefore aim to report further with a larger cohort in future analysis.

17 Comparing Outcomes of Sequential vs Concurrent Breast and Gynecologic Risk Reduction Surgery

Lila Lunt,¹ Amanda Copeland,² Margaret Schermerhorn,² Andrea Madrigrano,² Cristina O' Donoghue,² Melissa Rangel²

¹Rush University Medical Center, Chicago, IL

²Rush University Medical School, Chicago, IL

Background/Significance

Women who are diagnosed with breast cancer and/or inherited cancer gene mutations may be presented with ovary removal as part of their breast cancer treatment plan, either for risk reduction or for ovarian suppression as an adjunct to endocrine therapy in premenopausal women with high-risk features. Many hospitals have begun to offer concurrent breast and gynecologic surgery in order to minimize the number of surgeries, operative time, and length of stay. We examined the outcomes of women undergoing breast and gynecologic operations in order to determine the safety of concurrent operations.

Materials and Methods

We conducted a retrospective chart review of patients undergoing breast and gynecologic surgery, either sequentially or concurrently, for a newly diagnosed breast cancer and/or inherited cancer gene mutation at a single institution from 2015 to 2020.

Results

A total of 104 patients with a mean age of 50 years (range, 26-72) were identified. Seventy patients (69%) had breast and/or reconstructive surgery followed by gynecologic surgery and 32 patients (31%) had concurrent operations. Most patients had an invasive cancer diagnosis or ductal carcinoma in situ (94%) and 40 patients had a high-risk mutation (39%). Minimally invasive bilateral salpingectomies were the most common gynecologic procedure performed (98%). Of the concurrent operations, 3 were performed with breast surgery, 12 were performed with breast surgery and immediate reconstruction, 15 were performed with later-stage reconstruction and 2 were performed with surgery on the axilla. Thirty-one patients (30%)

experienced a total of 35 surgical complication (Clavian grade I-III) during their breast cancer treatment. Most of the complications were minor and did not require hospitalization or reoperation. On univariate analysis, there was no difference between the complication rates for patients who opted for concurrent surgeries vs sequential surgeries (25.0% vs 32.9%; $P = .57$). In a multivariate regression, patients who had concurrent surgery were not more likely than patients who had sequential operations to experience complications, controlling for race, medical comorbidities, smoking history, and if the patient had reconstruction (odds ratio, 0.81; 95% CI, 0.26-2.54).

Conclusions

We observed no increase in complication rates in patients who underwent combination breast and gynecologic surgery. Based on these results, we can continue to increase coordination among specialties in order to reduce the burden of multiple operations placed on patients with breast cancer.

21TiP Pivotal Phase 3, Randomized Controlled Trial Evaluating the Safety and Efficacy of Aminolevulinic Acid for the Real-time Visualization of Cancer Through Fluorescent Imaging During Breast-Conserving Surgery

Eleftherios P. Mamounas,¹ Rachel E. Eisenberg,¹ Danielle Henry,¹ Michael P. Kahky,¹ Marisa P. Cooke,¹ Jennifer Durant,¹ Michael T. Roberts,¹ Janice M. Porter,¹ Amy Nester,¹ Nayana Thalanki,² Kathryn Ottolino-Perry,² Ralph. S. DaCosta²

¹Orlando Health Cancer Institute, Orlando, FL; Terry. Mamounas@orlandohealth.com, Cell: (330)417-5252

²SBI ALApharma Canada Inc. Toronto, ON

Background

Breast-conserving surgery (BCS) aims to adequately resect the primary breast tumor while conserving as much healthy tissue as possible. Despite best efforts, positive margins are common after BCS, resulting in

repeated surgical procedures. Based on results from a phase 2 study (Ottolino-Perry K et al, *Breast Cancer Research*, 2021), this phase 3 randomized controlled trial (NCT04815083) evaluates the safety and efficacy of the optical imaging agent aminolevulinic acid hydrochloride (ALA HCl; PD G 506 A). ALA HCl collects in cancer cells as the fluorescent molecule protoporphyrin IX (PpIX), which can be visualized intraoperatively using the Eagle V1.2 Imaging System. The study's objectives are to (1) evaluate the safety and efficacy of PD G 506 A and (2) characterize the diagnostic performance of ALA HCl to identify malignant breast tissue using the Eagle V1.2 Imaging System.

Design & Method

Eligibility includes: female patients 18 years or older, histologically confirmed primary breast cancer, normal organ and bone marrow function, and planned BCS for primary breast cancer. Patients will be randomized to receive PD G 506 A or placebo orally 3 hours prior to anesthesia. All patients will undergo standard-of-care (SOC) BCS. Intraoperative fluorescence imaging will be performed using the Eagle V1.2 Imaging System to

identify PD G 506 A-induced PpIX fluorescence in the resected BCS specimen(s) and the lumpectomy cavity. Surgeons will remain blinded to group allocation until completion of SOC BCS. Following surgeon unblinding, additional tissue will be resected based on the presence of fluorescence on specimen margins and/or in the lumpectomy cavity. Data collected include patient demographics, tumor characteristics, adverse events, presence of fluorescence in the cavity and/or resected specimen, histopathologic assessment of resected tissues, patient-reported cosmetic outcome, and reexcision rates. The primary end points are the

percentage of patients with histopathologic-positive margins following SOC BCS that are converted to negative margins following fluorescence-guided resection (FGR), specificity to identify residual carcinoma after FGR, and sensitivity to identify residual carcinoma at the end of SOC.

Status

The clinical trial was activated in April 2021. Orlando Health, Florida, is the current site, with a total target of 20 sites. It is expected to run for about 2.5 years with a targeted accrual of 400 patients.

26 An Institution Wide Surgeon and Radiologist Survey of Savi Scout Versus Other Localization Procedure Preferences in Breast Conservation Surgery

Kelly McGuigan,¹ Allison Pensa,² Stefania Nolano²

¹Sidney Kimmel Medical College, Philadelphia, PA; kcs020@students.jefferson.edu; 215-595-3329

²Sidney Kimmel Medical College, Philadelphia, PA

³Asplundh Cancer Pavilion, Abington Hospital-Jefferson Health, Willow Grove, PA

Background

Savi Scout is a newer technique used to localize nonpalpable breast cancer. It has recently been adopted by some physicians at our multilocation hospital network for breast conservation surgery (BCS). Numerous studies have found it to be a feasible alternative to wire localization. Physician preference plays a role in selection of localization techniques. Despite this, only 1 study has explored provider attitudes regarding Savi Scout implementation, but those physicians found it to improve workflow in and out of the operating room.

Materials & Methods

An electronic survey of radiologists and surgeons from a single institution who practice with Savi Scout, wire localization, or both was conducted. Data were collected from October to December 2021 using Qualtrics, a Health Insurance Portability and Accountability Act-compliant survey software. Physicians' demographics were collected along

with survey responses assessing clinician attitudes and beliefs.

Results

A total of 26 survey responses from 15 radiologists and 11 surgeons were recorded, 7 of which were incomplete. The average physician age was 45 years (n = 19); 9 physicians self-identified as male, 14 as female, and 1 preferred not to say (n = 24). The average number of years of use with Savi Scout ranged from less than 1 to 4 years (n = 15) while use of wire localization ranged from 2 to 33 years (n = 19).

The reported reasons for not using Savi Scout included lack of knowledge (n = 2), lack of training (n = 2), lack of access (n = 2), and other reasons (n = 13). Reasons for selecting one localization or another included physician preference (n = 14), availability (n = 7), cost (n = 6), patient preference (n = 5), and other reasons (n = 5). Physicians reported similar perceptions of overall patient satisfaction and patient cosmetic satisfaction between wire localization and Savi Scout. Open-ended responses showed multiple common themes.

Conclusions

Our research has demonstrated that there may be insufficient and conflicting data on physician opinions about the use of Savi Scout or wire localization for BCS throughout the institution. Given our limited sample size, a follow-up survey open to practitioners in multiple institutions, generating a greater number of responses, may elucidate a more conclusive understanding of reasons for or against the use of Savi Scout. Follow-up surveys could also include patient preferences and chart reviews data of long-term surgical outcomes.

29 The Effect of Personality Type on Satisfaction With Information Exchange in Breast Cancer Patients

Vijayashree Murthy,¹ Joshua Feinberg,¹ Dana Borgen,² Kristin E. Rojas,³ Vijaya Natarajan,⁴ Yocasta Mejia,⁴ Michael Silver,⁵ Charusheela Andaz,¹ Patrick Borgen,¹ Donna-Marie Manasseh¹

¹Breast Surgery, Department of Surgery, Maimonides Medical Center, Brooklyn, NY

²Rutgers University, The State University of New Jersey, New Brunswick, NJ

³Breast Surgery, Miller School of Medicine, University of Miami, Miami, FL

⁴Department of Clinical Research, Maimonides Cancer Center, Brooklyn, NY

⁵Department of Biostatistics, Research Administration, Maimonides Medical Center, Brooklyn, NY

Background

Type D (distressed) personality is a concept that was coined in the field of medical psychology and is defined as a tendency toward negative affectivity and social inhibition. Previous studies have demonstrated that when compared with other personality types, patients with cancer who have personality Type D experience lower quality of life and mental health status. One theory to explain this difference is that patient dissatisfaction with perceived receipt of information negatively impacts overall well-being. To further evaluate this hypothesis, this study aimed to identify differences in satisfaction with perceived receipt of information among 2 patient populations with a new cancer diagnosis: those with Type D personality and those with non-Type D personality.

Materials and Methods

A prospective survey study included patients diagnosed with breast cancer at a single institution between January 2019 and December 2021. Participants completed a global assessment survey instrument to determine their personality type prior to speaking to their physician. Immediately following their visit, patients then completed the European Organisation for Research and Treatment of Cancer – Quality of Life information module (INFO 25). INFO25 is a validated questionnaire composed of 25 questions based on a 4-point Likert scale used to assess patients' perceived understanding of their diagnosis and treatment. All analyses were conducted using SPSS v27.

Results

Ninety-eight patients with a diagnosis of breast cancer were enrolled in the study. Presentation, stage, and treatment receipt were similar between both personality groups. Among the 98 patients in the study cohort, 23 (23.5%) patients were Type D. Compared with the non-Type D patients, those with Type D were less satisfied with the provision of information by their physician (1.6 vs 1.8; $P < .05$). Following their consultation, patients in the Type D arm felt less confident than those in the non-Type D arm, with respect to their level of understanding of "disease diagnosis," "medical tests," and "treatment options."

Conclusions

In this study cohort from a nationally accredited urban cancer center, patients with breast cancer with Type D personality had lower perceived satisfaction with the information provided by their physician. Further studies should investigate methods to optimize information transfer and improve shared decision-making for breast cancer patients with Type D personality.

Turn page for Table >>

TABLE CONTINUED FROM PREVIOUS PAGE
Study Cohort Demographics, Clinical Data, and INFO25 Score

		Type D, n = 23 (%)	Non-Type D, N = 75 (%)	P value
Age		65 (58 - 75)	67 (54 - 74)	.737
Race	Caucasian	13 (57)	37 (49)	.013
	Hispanic	2 (9)	0 (0)	
	Black	7 (30)	38 (51)	
	Asian	1 (4)	0 (0)	
History of prior breast cancer	Yes	9 (39)	37 (49)	.477
	No	14 (61)	38 (51)	
Presentation	Abnormal imaging	14 (61)	49 (65)	1.00
	Palpable mass	9 (39)	26 (35)	
Clinical T stage	cTis	3 (13)	15 (20)	.72
	cT1a	8 (35)	18 (24)	
	cT1b	3 (13)	12 (16)	
	cT1c	3 (13)	12 (16)	
	cT2	4 (18)	13 (18)	
	cT3	1 (4)	3 (4)	
	cT4a	1 (4)	1 (1)	
	cT4b	0 (0)	1 (1)	
Clinical N stage	cN0	17 (74)	54 (72)	1.00
	cN1	4 (17)	15 (20)	
	cN2	2 (9)	6 (8)	
Clinical M stage	cM0	21 (91)	6 (8)	.667
	cM1	2 (9)	64 (84)	
Treatment plan	Neoadjuvant systemic therapy	0 (0)	5 (6.5)	.101
	Surgery	1 (4)	6 (8)	
	Primary endocrine therapy	13 (58)	24 (32)	
	Observation	5 (22)	30 (40)	
	Adjuvant chemotherapy	2 (8)	5 (6.5)	
	Adjuvant chemotherapy with radiation	0 (0)	4 (6)	
^{a,b} INFO25 Scores: higher score corresponds to more information received by patient from their physician	Diagnosis of disease	3.54 (304)	4 (3.25-4)	.172
	Medical tests for disease evaluation	4 (3.67-4)	4 (3.33-4)	.84
	Treatment for disease	3.63 (3-4)	4 (3.33-4)	.133
	Other aspects	3.25 (1.38-3.57)	3.13 (2-3.88)	.42
	Satisfaction	1.6 (1.6-1.8)	1.8 (1.6-2)	.027

^aValues indicate median score on the INFO25 4-point Likert scale (1-Not all, 2-A little, 3-Quite a bit, 4-Very much).

^bValues in parentheses indicate 25th to 75th percentile.

36 Are Positive Margins in DCIS a True Indication of Inadequate Surgery?

Dianne Seo,¹ Catherine Carruthers,¹ Kseniya Roudakova,¹ Lina Sizer,¹ Willian Carter,¹ Thomas Frazier¹

¹Main Line Health System, Philadelphia, PA

Background/Significance

According to the American Society of Breast Surgeons' 2017 "Consensus Guideline on Breast Cancer Lumpectomy Margins," margin status serves as a surrogate marker of residual disease in the breast and has an impact on a patient's risk of in-breast tumor recurrence. Margins for pure ductal carcinoma in situ (DCIS) treated with lumpectomy and radiation should be 2 mm or more. Close margins (<1 mm) at the chest wall or skin do not necessarily mandate reexcision. The use of margin status and lumpectomy reexcision rates as a measure of quality is controversial and may not reflect tumor biology.

Materials and Methods

To explore this in our academic community hospital, we identified 213 women diagnosed with DCIS who underwent lumpectomy and had margins assessed for a 2-mm standard from 2015 to 2020 in a retrospective study.

Results

Of 213 DCIS patients, 38 (17.8%) underwent breast conservation treatment and had positive margins on their initial pathology. Of these, 23 (60.5%) underwent a reexcision of margins in which the margins were able to be cleared: 20 of the 23 patients (87%) were found to have no residual disease in their second specimen and 3 (13%) required at least 2 additional surgical excisions of margins to be cleared after their initial surgeries. Ten of the 38 patients (26.3%) with positive margins following lumpectomy elected to proceed directly to mastectomy. All 10 were found to have residual disease. Five (13.2%) patients with positive margins had residual disease that was unable to be cleared despite surgical attempts. Negative margins were achieved in 23 (82.1%) of the 28 patients who elected to conserve their breasts.

Conclusions

While there is a consensus that 2-mm margins in DCIS are ideal, the technique to evaluate those margins is not uniform and the decisions for assessing and excising margins are still unclear. Almost half of patients with "positive margins" had no residual disease on reexcision, and in 13.2% of patients, we were unable to obtain satisfactory margins. Clearly, we need to improve our pathological assessment of margins as we learn more about the biology of DCIS.

41 A Single-Centre Report on the Upgrade Rate of Complex Sclerosing Lesions of the Breast

Carolyn P. Smullin,¹ Julie Le,² Thomas E. Lawton,³ Jennifer L. Baker,²

¹David Geffen School of Medicine at UCLA, Los Angeles, CA

²Department of Surgical Oncology, David Geffen School of Medicine at UCLA, Los Angeles, CA

³Department of Pathology, David Geffen School of Medicine at UCLA, Los Angeles, CA

Introduction

Radial scar or complex sclerosing lesion (CSL) of the breast is a benign and uncommon breast lesion characterized by stellate configuration of a fibroelastic core with entrapped ducts and lobules. The incidence of radial scar ranges from 0.6% to 3.7%. Despite benign pathology, the radiographic appearance of CSL can

overlap or be indistinguishable from invasive or in situ carcinoma. The upgrade rate to malignancy at excision varies between 2% and 26%, with most studies reporting around 10%. Radial scar can coexist with other proliferative high-risk lesions, thereby contributing to the overall upgrade rate. The greatest risk factor for upgrade is the presence of atypia on core needle biopsy (CNB), with upgrade rates consistently around 25% when atypia is present. The objective of this study was to evaluate factors associated with the upgrade rate of CSL and subsequent impact on treatment.

Methods

A single-center retrospective study was performed with females over 18 with radiographic- and pathology-concordant diagnosis of radial scar between 2015 and 2020. We excluded patients with biopsy-proven invasive or in situ disease within 3 months prior to and after biopsy-proven radial scar. The clinicodemographic information collected about our population included menopausal status, personal and family history of

malignancy, radiographic method of lesion detection, associated high-risk lesions, and adjuvant endocrine treatment. Primary outcome of upgrade rate was determined based on evidence of in situ or invasive disease on final pathology.

Results

In our institutional series, 82 patients were included, of whom 58 (70%) received surgery. After surgical excision, 1 case upgraded to ductal carcinoma in situ. Calcifications were seen in more than half of all lesions on CNB (53%).

On CNB, only 10% of lesions had associated atypia and 7% had associated high-grade lesions (atypical ductal hyperplasia or lobular hyperplasia); interestingly, the lesion that did upgrade on excision had neither feature present at the time of CNB.

Conclusion

Upgrade rates of radial scar remain low regardless of the presence of atypia or associated high-risk lesions. Omission of routine excision of complex sclerosing lesions can be safely considered.

45 The Informed Consent Experience for Breast Cancer Surgery and Its Association With Patient Satisfaction

Marisa C. Weiss,¹ Adam Leitenberger,² Frank J. Della Croce,³ Melissa Bollmann Jenkins,⁴ Donna-Marie Manasseh⁵

¹Chief medical officer/founder, Breastcancer.org; Director of Breast Radiation Oncology, Lankenau Medical Center, Wynnewood, PA

²Editorial director, Breastcancer.org.

³Founding partner, Center for Restorative Breast Surgery, New Orleans, LA

⁴Community director, Breastcancer.org

⁵Chief of breast surgery, Maimonides Breast Cancer Center, Brooklyn, NY

Background

Informed consent is a fundamental ethical and legal requirement to ensure that patients are aware of the risks and benefits of surgical interventions. An effective informed consent process provides adequate information, prioritizes patient comprehension, and facilitates shared decision-making with the goal of optimal patient outcomes and satisfaction.

Objective

We sought to characterize the informed consent process for patients undergoing breast cancer surgery and investigate the extent to which certain elements of the process are associated with patient satisfaction.

Methods

Breastcancer.org visitors and registered online community members in the United States were invited to complete an online survey between August 5 and October 2, 2021. The survey included multiple-choice

and rank-order questions about their informed consent and breast cancer surgery experience. All data were deidentified and analyzed in aggregate.

Results

The survey was completed by 2009 adult women diagnosed with breast cancer (mean age, 58 years; 85% White) who had surgery within the past 5 years (mean time since surgery, 17 months). Overall, 42% reported that they were alone when they signed the informed consent form, which was more common during vs before the pandemic (47% vs 34%; $P < .05$). Patients who were not alone were more likely to report being very/extremely satisfied with their surgical outcomes (61% vs 39%; $P < .05$). Patients reported being most comfortable when their surgeon was the health care provider who spoke with them before they signed the consent form (91%), as compared with a nurse (79%) or other health care provider (64%). Patients were also more satisfied with surgical outcomes when they felt their surgeons effectively informed them about their surgical options, adequately answered their questions, provided written educational materials, or referred them to reputable online sources. Of patients who were very/extremely satisfied with their surgical outcomes, 92% felt very/extremely well informed at the end of their surgical consultation process.

Conclusions

Patients with breast cancer reported higher satisfaction with surgical decisions when they had a positive informed consent experience that prioritized patient education, comfort, and engagement with the surgeon. This survey highlights the importance of investing in the informed consent process to facilitate shared decision-making for better patient satisfaction with surgical outcomes.