A Pilot Study of Applying New Device Technologies for Tissue Expander/Implant-Based Breast Reconstruction (Blossom Syringe Assist Device)

Study Protocol and Statistical Analysis Plan

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TITLE: A Pilot Study of Applying New Device Technologies for Tissue Expander/Implant-Based Breast Reconstruction (Blossom Syringe Assist Device)

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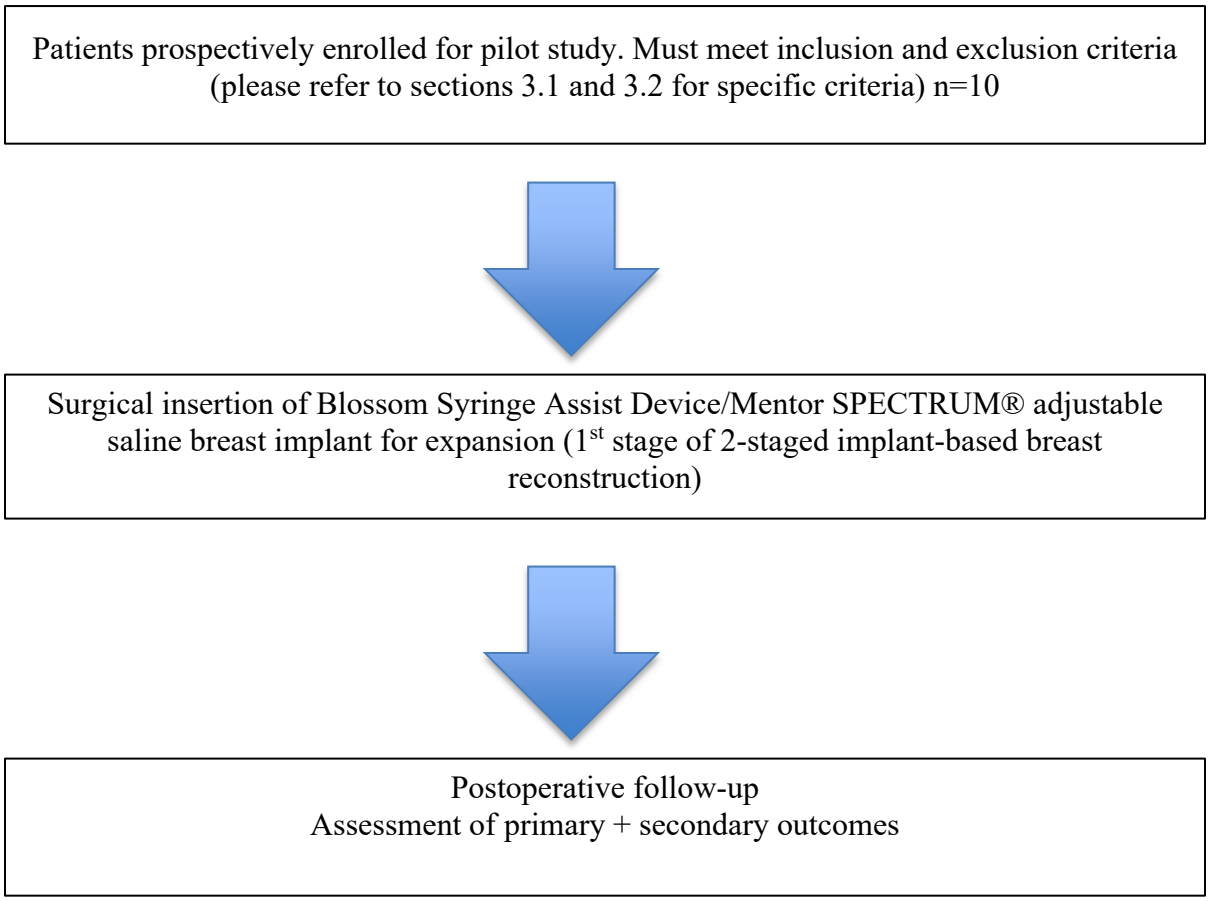
TABLE OF CONTENTS

PROTOCOL SYNOPSIS

TITLE	Applying New Device Technologies for Tissue Expander/Implant-Based Breast Reconstruction (Blossom Syringe Assist Device)
STUDY PHASE	I
INDICATION	To evaluate a device that has the potential to achieve the same reconstructive goals as conventional tissue expansion in a shorter period of time and while avoiding frequent injections through the skin, which cause patient discomfort and require many clinic visits.
INVESTIGATIONAL PRODUCT OR PROCEDURE	Blossom Smart Expander Technology (Syringe Assist Device)
PRIMARY OBJECTIVE(S)	Effectiveness of Blossom Device in 1st stage of expander to implant breast reconstruction (time to expansion)
SECONDARY OBJECTIVE(S)	Patient satisfaction, self-reported pain, incidence of complications
TREATMENT SUMMARY	Consenting patients will be prospectively enrolled. This investigational device slowly and continuously injects a small amount of saline based on pressure and volume in the expander. The expander devices will be inserted beneath the pectoralis major muscle in the usual fashion immediately after mastectomy. The nature of the surgery remains identical to that for conventional breast tissue expander insertion. Postoperative follow-up with documentation of clinical data will occur on a weekly basis until completion of breast expansion along with stabilization of surgical scars and percutaneous drain removal. Monthly follow-up, as indicated, will occur in preparation for the second stage expander to definitive implant exchange surgery.
SAMPLE SIZE	10

SCHEMA


Patients prospectively enrolled for pilot study. Must meet inclusion and exclusion criteria (please refer to sections 3.1 and 3.2 for specific criteria) n=10
Surgical insertion of Blossom Syringe Assist Device/Mentor SPECTRUM® adjustable saline breast implant for expansion (1st stage of 2-staged implant-based breast reconstruction)
Postoperative follow-up
Assessment of primary + secondary outcomes

LIST OF ABBREVIATIONS AND DEFINITION OF TERMS

AE	Adverse event
IBR	Implant-based breast reconstruction
IRB	Institutional Review Board

1. OBJECTIVES

1.1. Primary Objective

The primary objective of this study is to assess the clinical effectiveness of the application of Blossom Smart Expander Technology in 2-staged tissue expander/implant-based breast reconstruction. This new study may lead to the development of a new approach to tissue expander/implant-based breast reconstruction that is better tolerated by patients and decreases the total number of clinic visits. Effectiveness will be measured by total time to expansion, which is the primary outcome being investigated.

1.2. Secondary Objectives

Secondary objectives being investigated include the following:

- Patient Satisfaction
- Patient self-reported pain
- Incidence of complications

2. BACKGROUND

2.1 Study Disease

Tissue expander/implant-based breast reconstruction is the most common form of breast reconstruction in North America following mastectomy in patients diagnosed with either breast cancer or strong genetic predisposition for breast cancer. The conventional breast tissue expander requires weekly-biweekly injections of saline through the skin and into the integrated port using a needle and syringe in order to expand breast skin (standard of care). This is an office procedure and can be uncomfortable for patients, and also results in multiple clinic visits and a time delay (usually several weeks to months) until final expansion volume is achieved. Once this expansion process is complete, the patient may proceed to the 2nd stage surgery where the expander is exchanged for a definitive breast implant, thereby effectively completing reconstruction of the breast mound.

In contrast to the standard of care, the current clinical trial will evaluate the Blossom device as a method to continuously fill the expander with small quantities of saline based on pressure within the chambr and can potentially complete expansion within several weeks without the need for frequent office visits.

2.2 Study Agent/Device/Procedure

Blossom Smart Expander Technology (Syringe Assist Device), currently commercially available, aims to achieve the same reconstructive goals as conventional tissue expansion while avoiding frequent injections through the skin. The Blossom Syringe Assist Device is intended to be used to assist the clinician in the delivery of sterile saline to fill temporary, removable tissue expanders. This device includes a battery powered controller to provide a regulated method for delivery of a specific volume of saline at a specific rate. Supplied with the controller in a kit are the following components: single use sterile 10cc luer lock piston syringe, transfer set with proximal connection to the controller, and saline reservoir including distal connections to the

inflation port of the expander. The fluid path is clear, allowing for visual inspection of the content.

The Blossom device is a tissue expander accessory that allows for slow and continuous injection of small amounts of saline, from an external pouch and based on precise pressure and volume measurements, into breast expander implants.

Blossom Syringe Assist Device is FDA 510K approved. It does not require an Investigational New Drug application (IND).

2.3 Rationale

Weekly or biweekly injections of saline through the skin during conventional tissue expansion result in multiple clinic visits, patient discomfort, and a time delay (usually several weeks to months) until final expansion volume is achieved. The Blossom device may be employed in patients opting for 2-staged implant-based (expander to implant) breast reconstruction, while avoiding the aforementioned drawbacks of serial percutaneous saline injections via automated slow continuous injection based on pressure and volumetric measurements.

2.4 Study Design

- The primary purpose is a protocol designed to evaluate one or more interventions for treating a disease, syndrome, or condition.
- The interventional model is single group
- There is one intervention arm (Blossom Smart Expander Technology [Syringe Assist Device])
- The study will be open (no masking is used).
- The study will not be randomized.
- The primary outcome that the protocol is designed to evaluate is safety/efficacy.

2.5 Correlative Studies Background

There are no planned correlative studies.

3. PARTICIPANT SELECTION AND ENROLLMENT PROCEDURES

Refer to the Participant Eligibility Checklist in Appendix A.

There will be an assessment of how many people are approached and how many people decline or are ineligible, including the reasons for exclusions.

3.1 Inclusion Criteria

3.1.1 Diagnosis of breast cancer or reason for prophylactic mastectomy (e.g., BRCA mutation and/or strong family history of breast cancer), both unilateral or bilateral mastectomy.

3.1.2 No prior breast surgery (excluding biopsy and lumpectomy) or breast radiation.

3.1.3 Women age 18 years or older, no race-ethnic restrictions.

3.1.4 Ability to understand and the willingness to sign a written informed consent document.

3.1.5 No life expectancy restrictions.

3.1.6 ECOG or Karnofsky Performance Status will not be employed.

3.1.7 No requirements for organ and marrow function.

3.2 Exclusion Criteria

3.2.1 Recent steroid use.

3.2.2 No major medical comorbidities (defined as ASA III or greater[6])

3.2.3 No connective tissue disorder

3.2.4 Prior breast surgery, excluding biopsy and lumpectomy

3.2.5 History of or plan for breast radiation

3.2.6 Pregnancy and nursing patients will be excluded from the study

3.2.7 No restrictions regarding use of other Investigational Agents.

3.2.8 No exclusion criteria related to history of allergic reactions.

3.2.9 No exclusion criteria relating to concomitant medications or substances that have the potential to affect the activity or pharmacokinetics of the study agent, except as per 3.2.1.

3.2.10 No other agent-specific exclusion criteria.

3.2.11 No exclusion of cancer survivors or those who are HIV-positive.

3.3 Informed Consent Process

All participants must be provided a consent form describing the study with sufficient information for participants to make an informed decision regarding their participation. Participants must sign the IRB approved informed consent prior to participation in any study specific procedure. The participant must receive a copy of the signed and dated consent document. The original signed copy of the consent document must be retained in the medical record or research file.

3.4 Randomization Procedures

N/A

3.5 Study Timeline

Primary Completion:
The study will reach primary completion 12 months from the time the study opens to accrual.

Study Completion:
The study will reach study completion 24 months from the time the study opens to accrual.

4. TREATMENT PLAN

All consenting patients presenting to Dr. Dung Nguyen's breast reconstruction clinic and opting for immediate 2-staged tissue expander/implant-based breast reconstruction after

mastectomy will be given the option of study enrollment. Consenting patients will be prospectively enrolled to undergo 2-staged IBR with the application Blossom Smart Expander Technology (Syringe Assist Device) in the first stage (tissue expansion). The Mentor Spectrum saline implant (FDA approved device) is placed in the mastectomy skin pocket at the time of reconstruction. The fill tube is externalized and connected to the Blossom Syringe Assist Device that controls the gradual continuous fill of the Mentor Spectrum based on the pressure within the mastectomy skin pocket. The Mentor Spectrum implant stays in the patient for the duration of the expansion, approximately 2-3 weeks. The Blossom device is external and is detachable. BlossomTM Instructions for Use that a saline bag of no greater than 250cc be connected to the transfer set. If required, additional saline bags can be attached. There are 3 rates of infusion that can be selected by the physician to achieve optimal results. The volume delievered is determined by the difference in the initial and remaining volume in the saline bag. The nature of the surgery remains identical to that employed for conventional breast tissue expander insertion following mastectomy. The Blossom device is connected at the time of surgery. The decision to initiate filling immediately intraoperative versus in the clinic is determined by the surgeon based on conition of the patient’s skin. This decision making process is similarly being done currently with conventional tissue expander reconstruction. This device can be used in immediate or delayed reconstruction. The pressue sensing technology and the ability to infuse very small quantity of liquid continuously offer a key advantage over conventional TE approach to allow patients with immediate TE reconstruction to complete their expansion earlier and safely. Postoperative follow-up will occur within 1 week of surgery. Weekly follow-ups with documentation of clinical data throughout will also take place until completion of the expansion, stabilization of surgical scars, and removal of all percutaneous drains. Thereafter, follow-ups will be scheduled as needed (monthly) according to usual clinical practice in implant-based breast reconstruction in preparation for the second stage expander to definitive implant exchange. Time to expansion completion, patient satisfaction (including self-reported pain), and incidence of complications will be recorded throughout the follow-up period.

A video recording of 1-2 cases in the study group may occur (intraoperative). The purpose of these videos would be to demonstrate the placement of the Blossom Smart Expander Technology in-situ. These recordings may also supplement eventual publications and scientific presentations. Only patients specifically consenting to video recording will be affected. All videos will be deidentified (no facial identification possible). Videos will be kept in a secure, encrypted location and destroyed within 5 years following completion of the study. Photography will be routinely used pre- and postoperatively, with appropriate patient consent, in order to document aesthetic outcomes. Tissue samples will not be retained for future research.

4.1 General Concomitant Medication and Supportive Care Guidelines

The Women's Cancer Center is a collaborative environment for treatment of women with breast disease. Physicians remain apprised of other protocols in which their patients are involved through direct communication with other physicians and review of patients' electronic medical record. Patients in our study will not be routinely involved in more than one study, though this would not preclude study participation. There will be no routine use of concomitant medications or any additional supportive care medications or treatments. Concomitant radiotherapy is an exclusion criterion for study participation.

Procedures performed are a normal part of clinical management for this condition. Risks associated with the Blossom device include device malfunction. Risks also include those common to all tissue expanders used in conventional tissue expansion (standard of care): infection, extrusion, and pain. Importantly, in the event of any pain due to volume fill, the Blossom technology device can easily be disconnected by the patient in a reliable and safe manner.

The care of the port is much like drain care. The patient will have a demonstration of the Blossom Device and how to clean the port by the Nurse Coordinator at the time of pre-op. This will be reinforced post-op and in clinic much like conventional tissue expander reconstruction. The patient will also receive written patient instructions.

4.2 Criteria for Removal from Study

Patients will be removed from the study in the event of withdrawal of consent. Patients would then be eligible for placement of conventional tissue expanders. The study as a whole would only be terminated prematurely if the Blossom device proved to be clearly more ineffective, since traditional tissue expansion is still a safe and effective method of expansion. The study will terminate if there is increased incidence of complications noted above rates of complications reported in the standard tissue expander-implant reconstruction.

4.3 Alternatives

Patients will be monitored at routine clinic follow-up visits. They are counseled on warning signs that should prompt a call to their physician, and provided with a phone number at which they can reach a physician for advice at all hours. None of these methods of protection jeopardizes patient confidentiality beyond the risks inherent in routine patient care. A study participant selected for the Blossom Smart Expander Technology tissue expander/implant-based breast reconstruction arm may undergo the alternative, conventional tissue expander/implant-based breast

reconstruction, only if she chooses to withdraw from the study. There are no other alternatives available within the study.

5. INVESTIGATIONAL AGENT/DEVICE/PROCEDURE INFORMATION

5.1 Investigational Agent/Device/Procedure

Blossom Smart Expander Technology is a FDA-approved (510K) medical device. It consists of a syringe assist device connected to the Mentor SPECTRUM® Adjustable Saline Breast Implant. Blossom Smart Expander Technology aims to achieve the same aforementioned reconstructive goals of traditional breast tissue expander implants while obviating the frequent percutaneous injections by means of automated slow and continuous saline injection based on pressure and volume measurements in the associated expander implant (Mentor SPECTRUM®). The Mentor Spectrum device is a onetime use device that is placed during surgery, but it is designed to allow providers to adjust volume (add or take out fluid from the prosthesis) after surgery in an outpatient setting through the remote port. In this study the Mentor Spectrum will be used in exactly the same way except rather than implant the remote port, the fill tube will be exteriorized at for a few centimeters to connect it to the Blossom controller device. The Mentor Spectrum will be treated like other tissue expanders in that at the conclusion of the expansion process the fill tube will be removed and ultimately the Spectrum will be removed and replaced with a permanent implant. The Mentor Spectrum can be used as a permanent implant in patients who desire a saline implant after removal of the infusion tube.

The Blossom Syringe Assist Device is intended to be used to assist the clinician in the delivery of sterile saline to fill temporary, removable tissue expanders. This device includes a battery powered controller to provide a regulated method for delivery of a specific volume of saline at a specific rate. Supplied with the controller in a kit are the following components: single use sterile 10cc luer lock piston syringe, transfer set with proximal connection to the controller, and saline reservoir including distal connections to the inflation port of the expander. The controller (pump) is 6.5” long, 3.5” tall, 1.25” wide and weighs 0.7lbs. AA batteries are changed every 3 days. There is a low battery indicator to remind patients to change the AA batteries every 3 days. The fluid path is clear, allowing for visual inspection of the content. If the device fails and a manual process is used. The device can be detached from the fill tube. The fill tube of the Mentor Spectrum device is externalized much like a drain and connected to the Blossom Syringe Assisted Device. It is expected to have the similar rate of infection as a standard drain.

A Mentor Spectrum® adjustable saline breast implant for expansion, coupled with the Blossom Syringe Assist device, will be inserted beneath the pectoralis major muscle in the usual fashion immediately after mastectomy. The nature of the surgery remains identical to that employed for conventional breast tissue expander insertion following mastectomy .

Please see attached instruction brochure for further information on Blossom Technology.

5.2 Availability

Marz Medical

5.3 Agent Ordering

The devices will be requested from Marz Medical directly, as needed.

Marz Medical, Inc.
2500 Hospital Drive, Bldg 9
Mountain View, CA 94040
510-441-4017

5.4 Agent Accountability

The Blossom devices/kits will be stored together with the appropriate ordered breast implants for each individual patient.

6. DOSE MODIFICATIONS

No treatment modifications are envisioned.

If the investigational device were to fail to achieve the projected expansion of the breast skin, conversion to the traditional breast expander device with manual percutanous saline injections would be carried out, as indicated.

7. ADVERSE EVENTS AND REPORTING PROCEDURES

7.1 Potential Adverse Events

Since the Blossom Syringe device will be connected to and used with the Mentor SPECTRUM® Adjustable Saline Breast Implant the Risks include those common to all breast tissue expander implants procedures: capsular contracture, infection, extrusion, malposition, and pain. Importantly, these risks are due to the breast expander itself and as such are unavoidable in patients undergoing conventional 2-staged IBR. Furthermore, in the event of any pain due to volume fill, the Blossom technology device can easily be disconnected by the patient in a reliable and safe manner.

7.2 Adverse Event Reporting

Adverse events will be graded according to CTCAE v4.03. Both Serious and Non-Serious Adverse Events will be clearly noted in source documentation and listed on study specific Case Report Forms (CRFs). The Protocol Director (PD) or designee will assess each Adverse Event (AE) to determine whether it is unexpected according to the Informed Consent, Protocol Document, or Investigator's Brochure, and related to the investigation. All Serious Adverse Events (SAEs) will be tracked until resolution, or until 30 after the last dose of the study treatment.

SAEs CTCAE Grade 3 and above, and all subsequent follow-up reports will be reported to the Stanford Cancer Institute Data and Safety Monitoring Committee (DSMC) using the study specific CRF regardless of the event's relatedness to the investigation. Following review by the

DSMC, events meeting the IRB definition of 'Unanticipated Problem' will be reported to the IRB using eProtocol within 10 working days of DSMC review, or within 5 working days for deaths or life-threatening experiences.

8. CORRELATIVE/SPECIAL STUDIES

N/A

9. STUDY CALENDAR

	Pre-Study	Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8	Wk 9	Wk 10	Wk 11	Wk 12	Off Study
Blossom Syringe Assist Device, postoperative assessments[a]		X	X	X	X	X	X	X	X	X	X	X	X	
Informed consent	X													
Demographics	X													
Medical history	X													
Concurrent meds	X													
Physical exam	X													
Vital signs	X													
Height	X													
Weight	X													
Adverse event evaluation[a]		X ----------X												
B-HCG	X													

[a]Device postoperative assessment and adverse events (AEs) evaluation will be conducted on a weekly basis for 12 weeks, with assessments in clinic every other week and by phone the alternative every other week.

NOTE: Baseline exams and tests performed as indicated above. Once investigational device is inserted surgically, the patient will undergo follow-up as mentioned previously until the second stage expander to implant exchange procedure.

10. MEASUREMENTS

10.1 Primary outcome measure: time to full expansion

10.1.1 This outcome will be measured on all subjects.

10.1.2 Defined as number of days until desired expansion volume is achieved. This outcome is not assessing a safety issue.

10.1.3 Outcome will be measured by calculating the number of days from expander placement to achievement of desired expansion volume.

10.1.4 Measurement time points include date of expander placement and date that desired expansion volume is reached. Follow-up will be 12 months.

10.1.5 Response is not the primary outcome.

10.2 Secondary outcome meausure: patient satisfaction

10.2.1 This outcome will be measured on all subjects.

10.2.2 Defined as patient satisfaction with expansion process.

10.2.3 Outcome will be measured by non-validated surveys (Breast Q) administered to patients in clinic in order to assess satisfaction. Patients will be asked to rank satisfaction on the following scale: very satisfied, somewhat satisfied, neutral, somewhat dissatisfied, very dissatisfied.

10.2.4 Measurement time points will be at postoperative clinic visits, which will occur at weekly and intervals during the expansion process. Total follow-up will be approximately 12 months.

10.2.5 Response is not the primary outcome.

10.3 Secondary outcome measure: incidence of complications

10.3.1 This outcome will be measured on all subjects.

10.3.2 Defined as complications associated with tissue expansion process, including expander extrusion, wound breakdown, infection, and/or device malfunction.

10.3.3 Outcome will be measured by assessment of these patients at postoperative clinic visits for these complications.

10.3.4 Measurement time points will be at postoperative clinic visits, which will occur at weekly intervals during the expansion process. Follow-up will be approximately 12 months.

10.3.5 Response is not the primary outcome.

10.4 Secondary outcome meausure: pain with expansion

10.4.1 This outcome will be measured on all subjects.

10.4.2 Defined as self-reported pain associated with expansion process.

10.4.3 Outcome will be measured by non-validated surveys (Breast Q) administered to patients in clinic in order to assess pain. Patients will be asked to rank pain level on a scale of 0 to 10, with 0 being the least and 10 being the most.

10.4.4 Measurement time points will be at postoperative clinic visits, which will occur at weekly intervals during the expansion process. Follow-up will be approximately 12 months.

10.4.5 Response is not the primary outcome.

11. REGULATORY CONSIDERATIONS

11.1 Institutional Review of Protocol

The protocol, the proposed informed consent and all forms of participant information related to the study (e.g. advertisements used to recruit participants) will be reviewed and approved by the Stanford IRB and Stanford Cancer Institute Scientific Review Committee (SRC). Any changes made to the protocol will be submitted as a modification and will be approved by the IRB prior to implementation. The Protocol Director will disseminate the protocol amendment information to all participating investigators.

11.2 Data and Safety Monitoring Plan

The Stanford Cancer Institute Data and Safety Monitoring Committee (DSMC) will be the monitoring entity for this study. The DSMC will audit study-related activities to determine whether the study has been conducted in accordance with the protocol, local standard operating procedures, FDA regulations, and Good Clinical Practice (GCP). This may include review of the following types of documents participating in the study: regulatory binders, case report forms, eligibility checklists, and source documents. In addition, the DSMC will regularly review serious adverse events and protocol deviations associated with the research to ensure the protection of human subjects. Results of the DSMC audit will be communicated to the IRB and the appropriate regulatory authorities at the time of continuing review, or in an expedited fashion, as needed.

11.3 Data Management Plan

The Protocol Director, or his/her designee, will prepare and maintain adequate and accurate participant case histories with observations and data pertinent to the study. Study specific Case Report Forms (CRFs) will document treatment outcomes for data analysis. Case report forms

will be developed using the REDCap database system and will be maintained by Stanford Box account. CRFs will be kept in a locked office, only accessible to the research team.

12. STATISTICAL CONSIDERATIONS

12.1 Statistical Design

This study is a prospective clinical trial.

12.1.1 Randomization

N/A

12.2 Interim analyses

There are no planned interim analyses

12.3 Descriptive Statistics and Exploratory Data Analysis

Measures of central tendency and measures of spread will be performed for the primary outcome (time to full expansion, in days)

12.4 Primary Analysis

(10.1): Time to full expansion

12.4.1 Analysis Population

All participants will be included in this analysis. Primary analysis will be an intent-to-treat principle.

12.4.2. Analysis Plan

Student's t-test will be applied to compare the primary outcome to values commonly reported in the literature in conventional 2-staged IBR.

12.5 Secondary Analysis

(10.2): patient satisfaction

(10.3): incidence of complications

(10.4): pain with expansion

12.5.1 Analysis Population

All participants will be included in these secondary analyses. Any missing data will be reported as

such in the results.

12.5.2 Analysis Plan

Survey data for secondary outcomes 10.2 and 10.4, as described in previous sections, will be tabulated. Secondary outcome 10.3 will be analyzed with Student's t-test in order to compare with complication rates reported in the literature for conventional 2-staged IBR.

12.6 Sample Size

12.6.1 Accrual estimates

Ten patients will be recruited prospectively. This is a pilot study. Ample time has been allotted for patient recruitment, and ten is a very feasible number so no shortage is expected. In the unlikely event that there is difficulty in recruiting a sufficient number of patients at Stanford Hospital, additional recruitment efforts at affiliated Stanford sites will be considered, if approved.

12.6.2 Sample size justification

This is a pilot study. This initial pilot group may provide the basis for proceeding to a prospective randomized-controlled trial thereafter.

12.6.3 Effect size justification

The most extensive study on rapid breast expansion post-mastectomy with expander implants emanates from Memorial Sloan-Kettering Cancer Center and includes 370 breast reconstructions in 314 patients. Mean time until last in-office expansion was reported as 6.6 weeks postoperatively[3]. Among the most highly-cited papers on conventional 2-staged implant-based breast reconstruction complications also comes from Memorial Sloan-Kettering Cancer Center and incorporates data on 1522 breast reconstructions in 1221 patients. This paper describes an overall complication rate of 5.6% for the stage 1 breast tissue expander insertion procedure and expansion process in nonradiated patients, which is identical to our study population characteristics. Confidence intervals not applicable to these 2 studies. These studies provide the ideal baseline to compare to as they include the same target population from a well-respected cancer center and high number of patients.

12.7 Criteria for future studies

As a pilot study, the criteria for success that would justify a fully powered study include: time to expansion (primary outcome) faster than described for the conventional technique in the literature ($p<.05$) as well as an incidence of complications comparable to that reported for conventional techniques in the literature. Lastly, acceptability by patients (based on the aforementioned surveys) will be taken into account.

13. REFERENCES

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[2] Collins N, Sharpe DT. Breast reconstruction by tissue expansion. A retrospective technical review of 197 two-stage delayed reconstructions following mastectomy for malignant breast disease in 189 patients. *Br J Plast Surg*. 2000;53(1):37-41.

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[5] Hsieh F, Lam TC. Evaluation of AirXpanders for breast reconstruction: early experience from Sydney. *Plast Reconstr Surg Glob Open*. 2015;3(8):e495.

[6] American Society of Anesthesiologists (ASA). ASA Physical Status Classification System. Accessed 7/9/2016. Available at: https://www.asahq.org/resources/clinical-information/asa-physical-status-classification-system.

[7]Cordeiro PG, McCarthy CM. A Single Surgeon's 12-year Experience with Tissue Expander/Implant Breast Reconstruction: Part I. A Prospective Analysis of Early Complications. *Plast Reconstr Surg*. 2006;118(4):825-31.

APPENDICES

APPENDIX A**: Participant Eligibility Checklist**

A Participant Eligibility Checklist must be completed in its entirety for each subject prior to registration. The completed, signed, and dated checklist must be retained in the patient's study file and the study's Regulatory Binder.

The study coordinator, treating physician and an independent reviewer must verify that the participant's eligibility is accurate, complete, and legible in source records. A description of the eligibility verification process should be included in the EPIC or other Electronic Medical Record progress note.

The following is an **example** of a Participant Eligibility checklist template. Modify this checklist to fit your study and include it in the appendix section of your protocol document. The protocol-specific checklist is **required** by the SRC and must be approved by the IRB.

Protocol Title:	**Applying New Device Technologies for Tissue Expander/Implant-Based Breast Reconstruction**
Protocol Number:	**36748**
Principal Investigator:	**Dr. Dung Nguyen**

II. Subject Information:

Subject Name/ID:
Gender: ☐ Male ☐ Female

III. Study Information:

SRC Approved ☐ IRB Approved ☐ Contract signed ☐

IV. Inclusion/Exclusion Criteria

Inclusion Criteria (From IRB approved protocol)	**Yes**	**No**	**Supporting Documentation***
1. Diagnosis of breast cancer or reason for prophylactic mastectomy (e.g., BRCA mutation and/or strong family history of breast cancer), both unilateral and bilateral mastectomy.	☐	☐	
2. No prior breast surgery (excluding biopsy and lumpectomy) or breast radiation	☐	☐	
3. Women age 18 years or older, no race-ethnic restrictions	☐	☐	
4. Ability to understand and willingness to sign written informed consent document	☐	☐	

5. No life expectancy restrictions	☐	☐	
6. ECOG or Karnofsky Performance Status will not be employed	☐	☐	
7. No requirements for organ and marrow function	☐	☐	
Exclusion Criteria (From IRB approved protocol)			
1. Recent steroid use	☐	☐	
2. No major medical comorbidities (defined as ASA III or greater)	☐	☐	
3. No connective tissue disorder	☐	☐	
4. Prior breast surgery, excluding biopsy and lumpectomy	☐	☐	
5. History of or plan for breast radiation	☐	☐	
6. Pregnant and nursing patients	☐	☐	
7. No restrictions regarding use of other Investigational Agents	☐	☐	
8. No exclusion criteria related to history of allergic reactions	☐	☐	
9. No exclusion criteria relating to concomitant medications or substances that have the potential to affect the activity or pharmacokinetics of the study agent, except as per #1	☐	☐	
10. No other agent-specific exclusion criteria	☐	☐	
11. No exclusion of cancer survivors or those who are HIV-positive	☐	☐	

*****All subject files must include supporting documentation to confirm subject eligibility. The method of confirmation can include, but is not limited to, laboratory test results, radiology test results, subject self-report, and medical record review.

IV. Statement of Eligibility

By signing this form of this trial I verify that this subject is [☐ **eligible** / ☐ **ineligible**] for participation in the study. This study is approved by the Stanford Cancer Institute Scientific Review Committee, the Stanford IRB, and has finalized financial and contractual agreements as required by Stanford School of Medicine's Research Management Group.

Treating Physician Signature:	Date:
Printed Name:	

Secondary Reviewer Signature:	Date:
Printed Name:	

Study Coordinator Signature:	Date:
Printed Name:	