XCM Biologic Tissue Matrix.
Reconstruction of the anterior abdominal wall following a TRAM flap breast reconstruction.
**Patient profile**
A 47-year-old female was diagnosed with right breast cancer following a positive mammogram and stereotactic needle biopsy. The patient was given surgical options and decided to undergo a right unilateral mastectomy and a pedicle TRAM flap reconstruction of her breast with repair of the donor area with XCM Biologic tissue matrix. The patient’s medical history was significant for hypertension, chronic obstructive pulmonary disease, obesity (BMI of 36), macromastia and a significant previous smoking history (she had quit smoking, 3 years previously).

**Surgical treatment**
The patient underwent a right mastectomy and sentinel lymph node biopsy by her general surgeon. She then underwent right breast reconstruction with a pedicle TRAM flap, and reconstruction of the abdominal donor area with an 8 cm x 20 cm piece of XCM Biologic tissue matrix. The XCM Biologic was secured with both horizontal mattress 0-Nurolon sutures (on a CT-1 needle) as well as a fascial stapling device. The sutures and staples were spaced at approximately 1 cm to 1.5 cm intervals, approximately 1 cm from the edge of the XCM Biologic. The interrupted suture technique provided a stronger and more secure attachment to the native fascia than a running suture technique. The patient tolerated these procedures well and was discharged to home 3 days later.

**Postoperative course**
One week after surgery the patient developed blistering of the upper and lower mastectomy flaps. The following week eschars formed on the upper and lower flaps. Approximately one month after the initial surgery the patient was taken to an outpatient surgery center for a partial debridement of the upper and lower mastectomy flaps, as well as a TRAM flap revision. The patient recovered well from the debridement. Approximately 4 months after her initial surgery she underwent placement of a right breast tissue expander beneath the TRAM flap and a scar revision of her abdomen where widening had occurred. At the time of scar revision, biopsies were taken at the repair site where XCM Biologic was used. Gross examination showed the XCM Biologic well incorporated into the surrounding tissue and no hernias or pseudohernias.

![Figure 1](image1.png) Intraoperative photograph of the patient's anterior abdominal wall after harvest of the left TRAM flap.

![Figure 2](image2.png) Intraoperative photograph of the patient's anterior abdominal wall defect repaired with XCM Biologic tissue matrix.

Results from case studies are not predictive of results in other cases. Results in other cases may vary.
Results
This clinically high-risk patient has recovered well from her right breast reconstruction with a pedicle TRAM flap. Her only significant complication was a partial loss of the upper and lower mastectomy flaps. At 4-months postoperative, the XCM Biologic demonstrated incorporation into the surrounding tissues. Histology from the biopsies confirmed vascularization and tissue ingrowth into the XCM biologic tissue matrix.

At 5-months postoperative, the patient's abdominal wall reconstruction with the XCM Biologic did not show signs of hernia development.

Conclusion
This case represents the use of XCM Biologic tissue matrix for abdominal wall reconstruction in a high-risk patient undergoing right breast reconstruction with a pedicle TRAM flap, postmastectomy for cancer. The XCM Biologic was well integrated into the repair site surrounding tissue and formed a fascia-like layer. The histology slides from the biopsies taken 4 months after surgery exhibited tissue ingrowth and neovascularization. The XCM Biologic tissue matrix provided strength and structural support while the processes of cellular proliferation and angiogenesis were underway in a human subject.

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**Surgeon profile**

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