



**Figure S1** Representative histology images showing the breast capsules around the acellular dermal matrix 8 months after placement. A 39-year-old woman was diagnosed with bilateral breast cancer (right stage II, left stage 0). The patient underwent bilateral two-stage tissue expander/implant reconstruction (textured anatomical implants BellaGel BATM-M; right 340 cc, left 310 cc) after bilateral skin-sparing mastectomies (right 238.5 g, left 243 g) with right axillary lymph node dissection and left sentinel lymph node biopsy. The patient received adjuvant hormone therapy without chemotherapy or radiation therapy. (A,B,C,D) CGCRYODERM 6 × 14 in the right breast versus (E,F,G,H) DermACELL 5 × 14 in the left breast. (A,E) Hematoxylin and eosin (H&E) staining, (B,F) Masson's trichrome (MT) staining, (C,G) immunohistochemistry (IHC) for alpha-smooth muscle actin ( $\alpha$ -SMA), and (D,H) IHC for CD31 (magnification  $\times 5$ , scale bar 200  $\mu\text{m}$ ).

| Sizes of ADM (surface area, $\text{cm}^2$ ), n (%) | CGCRYODERM (n=32) | DermACELL (n=32) |
|--|-------------------|------------------|
| 4x16 cm (64 $\text{cm}^2$ )                        | N/A               | 1 (3.13)         |
| 5x14 cm (70 $\text{cm}^2$ )                        | 3 (9.38)          | N/A              |
| 5x15 cm (75 $\text{cm}^2$ )                        | 3 (9.38)          | N/A              |
| 5x16 cm (80 $\text{cm}^2$ )                        | 1 (3.13)          | 5 (15.63)        |
| 6x12 cm (72 $\text{cm}^2$ )                        | N/A               | 1 (3.13)         |
| 6x14 cm (84 $\text{cm}^2$ )                        | 3 (9.38)          | N/A              |
| 6x15 cm (90 $\text{cm}^2$ )                        | 3 (9.38)          | N/A              |
| 6x16 cm (96 $\text{cm}^2$ )                        | 15 (46.88)        | 11 (34.38)       |
| 7x15 cm (105 $\text{cm}^2$ )                       | 2 (6.25)          | N/A              |
| 7x16 cm (112 $\text{cm}^2$ )                       | 2 (6.25)          | N/A              |
| 8x16 cm (128 $\text{cm}^2$ )                       | N/A               | 14 (43.75)       |

**Figure S2** Sizes of CGCRYODERM versus DermACELL used in this study.