### Supplemental Digital Content 2: Outcomes of interest for each research question

| Type of Outcome | Eligibility Criteria                                      | Timing of IBR w/r/t Chemo and Radiation | Materials for IBR | Anatomic Planes for IBR | Use vs. nonuse of ADMs During IBR |
|-----------------|----------------------------------------------------------|------------------------------------------|-------------------|-------------------------|-----------------------------------|
| **Benefit/Clinical Outcomes** | General quality of life* | X X X | X | X | X |
|                  | Physical well-being* | X X X | X | X | X |
|                  | Psychosocial well-being* | X X X | X | X | X |
|                  | Sexual well-being* | X X X | X | X | X |
|                  | Patient satisfaction with breasts* | X X X | X | X | X |
|                  | Patient satisfaction with surgical outcome* | X X X | X | X | X |
|                  | Planned surgeries for reconstruction* | X X X | X | X | X |
|                  | Recurrence of breast cancer | X X X | X | X | X |
|                  | Mortality* | X X X | X | X | X |
| **Surgical Complications** | Unplanned repeat hospitalization* | X X X | X | X | X |
|                  | Duration of unplanned repeat hospitalization* | X X X | X | X | X |
|                  | Unplanned repeat surgery for revision of reconstruction* | X X X | X | X | X |
|                  | Unplanned repeat surgery for complications* | X X X | X | X | X |
|                  | Pain* | X X X | X | X | X |
|                  | Analgesic use* | X X X | X | X | X |
|                  | Necrosis* | X X X | X | X | X |
|                  | Animation deformity* | X X X | X | X | X |
|                  | Implant-related infections* | X X X | X | X | X |
|                  | Implant rupture* | X X X | X | X | X |
|                  | Implant deflation* | X X X | X | X | X |
|                  | Implant malposition* | X X X | X | X | X |
|                  | Implant failure/loss or need for explant surgery* | X X X | X | X | X |
|                  | Capsular contracture* | X X X | X | X | X |
|                  | New neoplasms* | X X X | X | X | X |
|                  | Complications that delay other cancer-related treatments* | X X X | X | X | X |
|                  | Thromboembolic events* | X X X | X | X | X |
|                  | Infections not explicitly implant-related | X X X | X | X | X |
|                  | Wound dehiscence* | X X X | X | X | X |
|                  | Delayed healing* | X X X | X | X | X |
|                  | Seroma* | X X X | X | X | X |
|                  | Chronic conditions* | X X X | X | X | X |
|                  | Touch sensitivity | X X X | X | X | X |
|                  | Scarring | X X X | X | X | X |
|                  | Red breast syndrome | X X X | X | X | X |

Abbreviations: IBR = implant-based reconstruction, ADM = acellular dermal matrix, X = relevant to research question, . = not relevant to research question

* Denotes important outcomes that were considered when developing Strength of Evidence tables for at least one research question.