

## Number of Breast Cancer Surgery (Total Mastectomy vs Breast Conservation)

The distribution of patients who receive breast cancer surgery by surgery type  
(Phase 4 patients are not normally operated and therefore excluded from analysis)



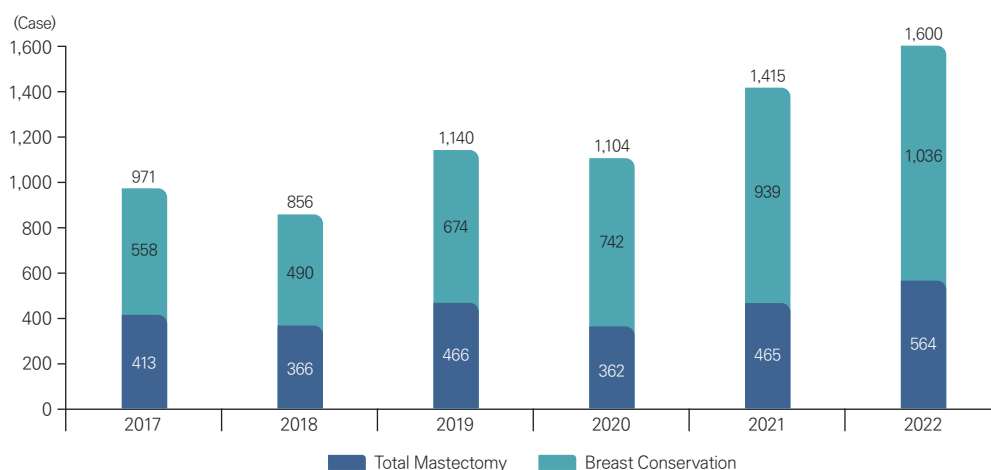
### Definitions

- ◆ **Total mastectomy:** A type of surgery where the entire breast is removed. There are two methods: nipple-preserving mastectomy and skin-sparing mastectomy.
- ◆ **Breast conservation:** A surgical method to preserve breast shape by resecting cancer lesions and parts of surrounding breast tissue.



### Result

January 1, 2017 – December 31, 2022



### Interpretation

- ◆ Breast cancer is the only cancer among the top 10 carcinomas that shows a continuous increase in the number of absolute patients, and the increase in the number of breast cancer patients at SNUBH is higher than this. This is due to the increase in patient inflow due to the improvement of the capacity and awareness of the medical staff at SNUBH.
- ◆ Medical staff's overseas training in 2018 and COVID-19 in 2020 slowed down for a while, but the number of surgeries in all breast cancer patients continues to increase.
- ◆ The number of breast preservation surgeries accounts for two-thirds of all breast cancer surgeries. This reflects the increased diagnosis rate of early breast cancer and oncological surgery in addition to the efforts of medical staff to actively consider the quality of life of patients.



### Improvement

- ◆ Considering the continuously increasing status of breast cancer patients in Korea, it is urgent to expand medical staff specializing in breast surgery for the continuous growth of breast centers.

Data source SNUBH EMR (Electronic Medical Record)

## Proportion of Immediate Reconstruction during Breast Cancer Surgery

The number of cases of immediate reconstruction after surgical resection of breast cancer



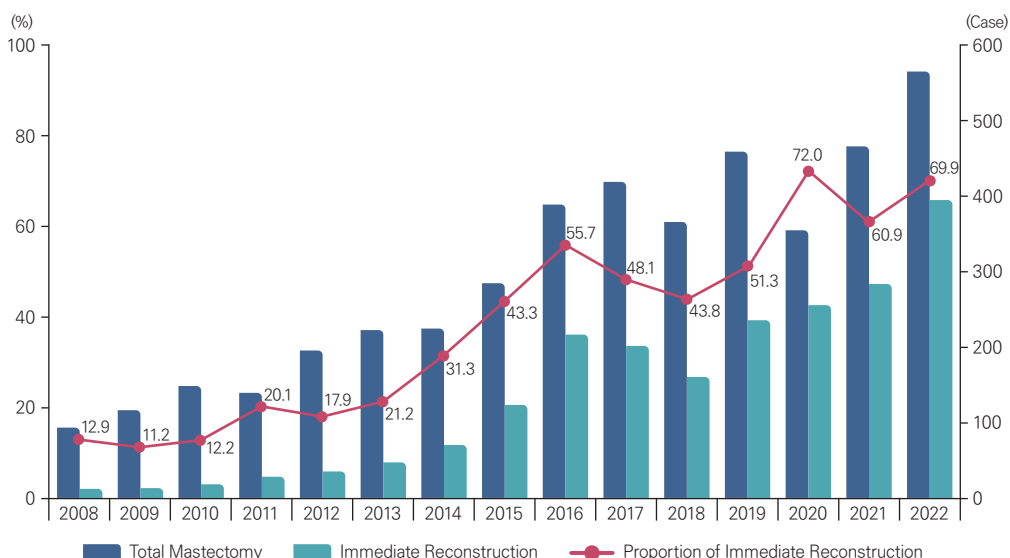
### Definitions

- ◆ **Immediate reconstruction:** A surgery that performs reconstruction simultaneously with surgical resection of breast cancer, and breast cancer surgery and restoration surgery are performed sequentially on the same day.



### Result

January 1, 2008 – December 31, 2022



### Interpretation

- ◆ Immediate reconstruction rates are increasing steeper compared to the increasing number of operations in total mastectomy.
- ◆ Considering the characteristics of breast cancer, which shows relatively good treatment performance compared to other carcinomas, access to quality of life after breast cancer treatment is required, which should be fully considered from the beginning of the treatment.
- ◆ As a result, reconstruction surgery is becoming one of the essential treatments, not an option.



### Improvement

- ◆ It is necessary to expand plastic surgery and surgical medical staff specializing in breast reconstruction with professional capabilities in line with the changing medical environment.

Data source SNUBH EMR (Electronic Medical Record)

## Number of Breast Reconstruction

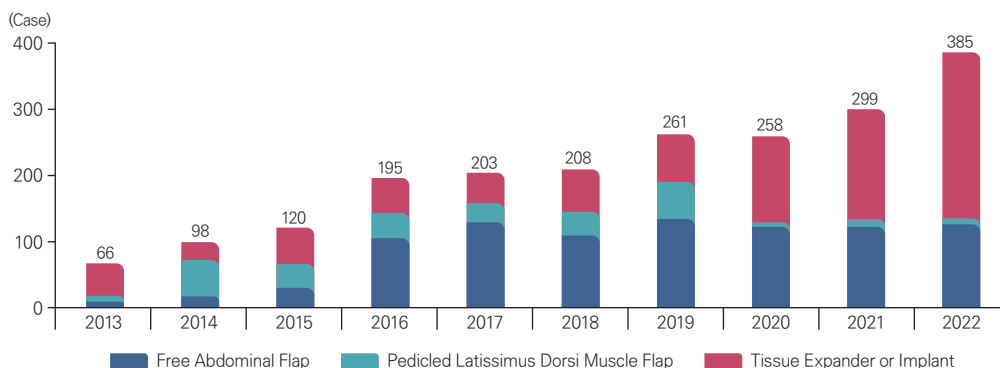
The number of breast reconstructions using free abdominal flap, pedicled latissimus dorsi muscle flap, tissue expander or implant

### Definitions

- ◆ **Breast reconstruction:** A surgery that maximally reconstructs the original shape of the breast by using autologous tissues or prosthetic implants.
- ◆ **Free abdominal flap:** Breast reconstruction surgery using transverse rectus abdominis musculocutaneous free flap or deep inferior epigastric artery perforator free flap.
- ◆ **Pedicled latissimus dorsi muscle flap:** Breast reconstruction surgery using the latissimus dorsi musculocutaneous pedicled flap.
- ◆ **Tissue expander or implant:** Breast reconstruction surgery using tissue expander or implant.

### Result

January 1, 2013 – December 31, 2022



### Interpretation

- ◆ The number of breast reconstruction surgeries using free abdominal flap, tissue expander or implant, continues to increase, and surgeries using pedicled latissimus dorsi muscle flap showed an decreasing trend.
- ◆ Breast reconstruction is reported to not only help physical health such as the spine and shoulders but also alleviates the feeling of loss in women whose breast had to be removed and helps them maintain or regain femininity, ultimately enhancing the quality of life.

Data source SNUBH EMR (Electronic Medical Record)

- Relevant Research
- 1) Fernández-Delgado J, et al. "Satisfaction with and psychological impact of immediate and deferred breast reconstruction". *Annals of Oncology*, 2008, 19(8), pp. 1430–1434.
  - 2) Kang HJ, et al. "Immediate breast reconstruction after a mastectomy for breast cancer". *Journal of the Korean Surgical Society*, 2000, 59(5), pp. 584–589.
  - 3) Myung Y, Son Y, Nam TH, Kang E, Kim EK, Kim IA, Eom KY, Heo CY, Jeong JH. Objective assessment of flap volume changes and aesthetic results after adjuvant radiationtherapy in patients undergoing immediate autologous breast reconstruction. *PLoS One*. 2018 May 21;13(5): e0197615.
  - 4) Myung Y, Choi B, Kwon H, Heo CY, Kim EK, Kang E, Jeong JH, Yang EJ. Quantitative analysis of shoulder function and strength after breast reconstruction: A retrospective cohort study. *Medicine (Baltimore)*. 2018 Jun;97(24):e10979.
  - 5) Jeong JH, Choi B, Chang SY, Kim EK, Kang E, Heo CY, Myung Y. The Effect of Immediate Breast Reconstruction on Thoracic Spine Alignment After Unilateral Mastectomy. *Clin Breast Cancer*. 2018 Jun;18(3):214–219.
  - 6) Myung Y, Choi B, Yim SJ, Yun B, Kwon H, Pak CS, Heo C, Jeong JH. The originating pattern of deep inferior epigastric artery: anatomical study and surgical considerations. *Surg Radiol Anat*. 2018 Aug;40(8):873–879.

## Success Rate of Breast Reconstruction

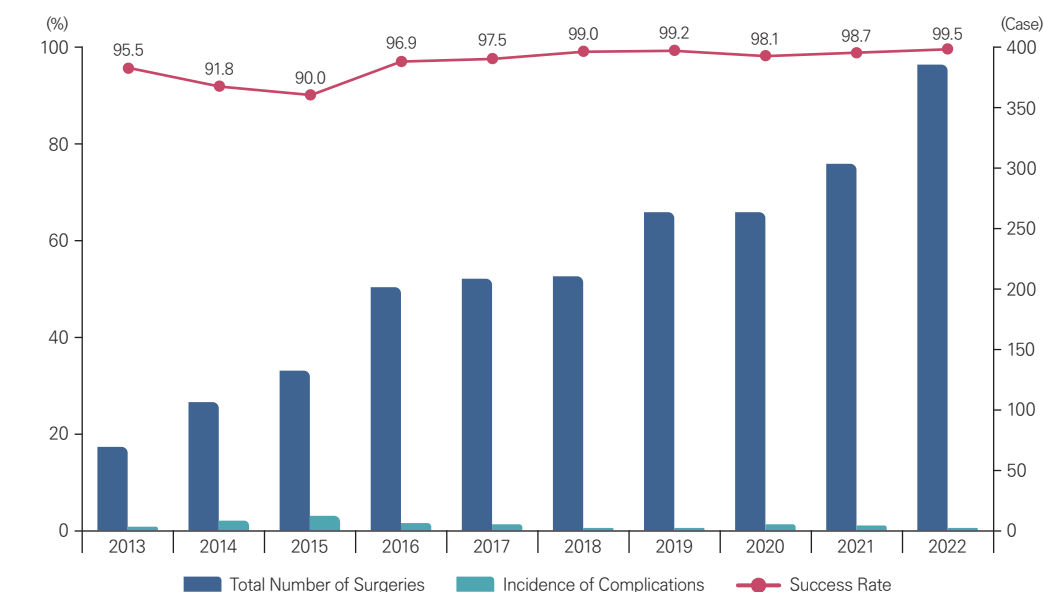
The proportion of successful breast reconstruction cases that did not cause complications including flap necrosis and surgical site infection, after the surgeries using free abdominal flap, pedicled latissimus dorsi muscle flap, tissue expander or implant

### Definitions

- ♦ **Flap necrosis:** A part or all of the flap was necrotic due to anastomotic failure or surgical site infection.
- ♦ **Surgical site infection:** Clinical symptoms that indicated the infection of the area where a tissue expander or implant had been inserted, or a positive result of the bacterial culture test.

### Result

January 1, 2013 – December 31, 2022



### Interpretation

- ♦ There are really low complications related to the surgical site infection after restricting the flap necrosis and implants after surgeries using the free abdominal flap. Such a figure is much lower for the complication rate(5%-15%) of major hospitals in the US which means high treatment and surgical results.

Data source SNUBH EMR (Electronic Medical Record)

Relevant Research 1) SS Kroll, B Baldwin, et al. "A Comparison of Outcomes Using Three Different Methods of Breast Reconstruction". 'PRS', 1992, 90(3).