



# Breast Reconstruction Options

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# Importance of Breast Reconstruction

As successes in treating breast cancer have grown, more women have been surviving the diagnosis of breast cancer. As survivorship increased in the 1990s, a larger number of women were living with surgical absence of the breast caused by mastectomy and the importance and need for breast reconstruction became evident.

This culminated in public policy with the passage of the Women's Health and Cancer Rights Act (WHCRA) of 1998, a federal law which mandates coverage of reconstructive surgery following mastectomy for all health plans that provide medical and surgical benefits.

# What Breast Reconstruction is NOT

Breast reconstruction is important, but it is also necessary to point out what breast reconstruction it is not.

While breast reconstruction is a treatment for breast cancer patients, it DOES NOT “treat” breast cancer.

Mastectomy treats breast cancer.

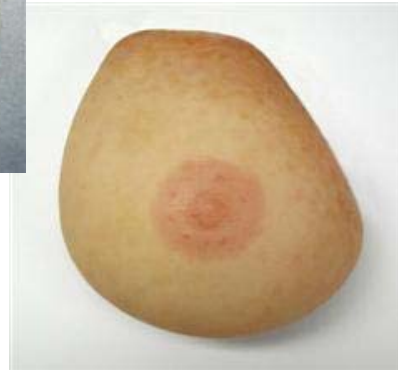
Radiation therapy treats breast cancer.

Chemotherapy treats breast cancer.

Breast reconstruction treats the physical defect caused by mastectomy.

# Options for Breast Reconstruction

The first option regarding breast reconstruction is non-surgical reconstruction (external breast prosthesis)



# Advantages of an External Prosthesis

- No additional risks of surgery after mastectomy
- No additional recovery time after mastectomy
- No need for revision surgery over lifetime or opposite breast surgery for symmetry
- No additional scars after mastectomy
- Excellent symmetry and size match when in clothing
- The prosthesis can be refitted as opposite breast changes with age.
- Equivalent satisfaction rates compared to those who choose surgical reconstruction
- Possibly better breast cancer recurrence surveillance
- Patient can decide to undergo surgical reconstruction later if dissatisfied

# Who has the external breast prosthesis?



A



B



C

# Who has the external breast prosthesis?



ALL OF THEM

# Disadvantages/Limitations of an External Prosthesis

- Complaints of “heaviness”
- Complaints of sweating between prosthesis and skin
- Rashes or skin reaction (rare)
- Inconvenient (i.e. answering the door in a bathrobe)
- Possible embarrassment if slips out of place

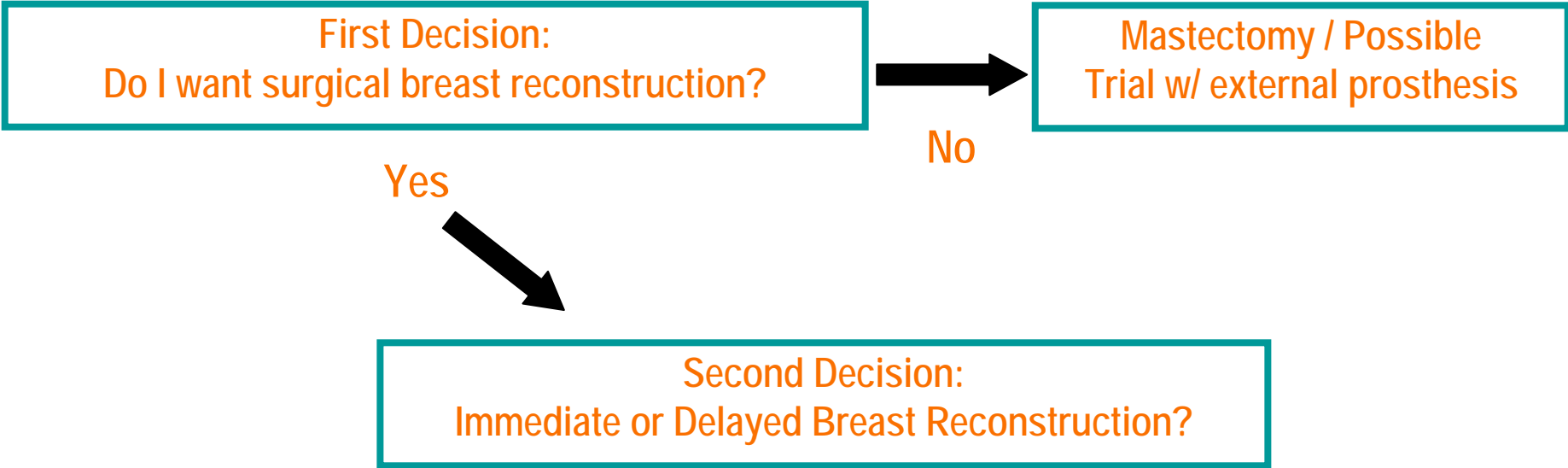
And most of all...

**Only improves symmetry when clothed**

# Limitations of Surgical Breast Reconstruction

- The purpose of breast reconstruction is restoration of breast form.
- Breast reconstruction does not restore breast function.
- Because nerves to the skin and breast tissue are removed during mastectomy, some amount of surface and all deep sensation of the breast is lost and does not return in a reconstructed breast, regardless of what type of reconstruction is performed.
- Nipple reconstruction, if desired by a patient, is performed after breast reconstruction and does not produce a responsive nipple to sexual stimulation or temperature changes. Even if a nipple-sparing mastectomy is performed, the nerves that provided sexual stimulation and nipple reactivity are removed during mastectomy and do not return.

# Surgical Breast Reconstruction Road Map



# Immediate vs. Delayed Breast Reconstruction

Immediate - simply means that the first step in the process of breast reconstruction is performed during the same operation immediately after the mastectomy is finished.

Delayed - simply means that the first step in the process of breast reconstruction is performed after the patient has recovered from her mastectomy.

- *Most types of breast reconstruction need at least one surgical revision.*

# Advantages of Immediate Breast Reconstruction

- One (less) general anesthesia
- One (less) recovery period
- Less time before “completion of reconstruction”
- Do not need to experience complete mastectomy deformity giving a possible psychological advantage
- Decreased overall cost (hospital stay, post-operative visits, pain medications, time off work, are all reduced)

# Advantages of Delayed Breast Reconstruction

- Stage of breast cancer and need for post-mastectomy neoadjuvant therapy is known because final pathology is complete
- Lessens “information overload” and allows a patient to concentrate on treatment of her cancer before having to deal with questions regarding “cosmetic result” and different options of breast reconstruction
- Lowers patient’s expectations of breast reconstruction after living with mastectomy defect
- Allows a patient to attempt a trial with an external breast prosthesis to determine “acceptability” for her specifically

# When Do We Not Offer Immediate Breast Reconstruction

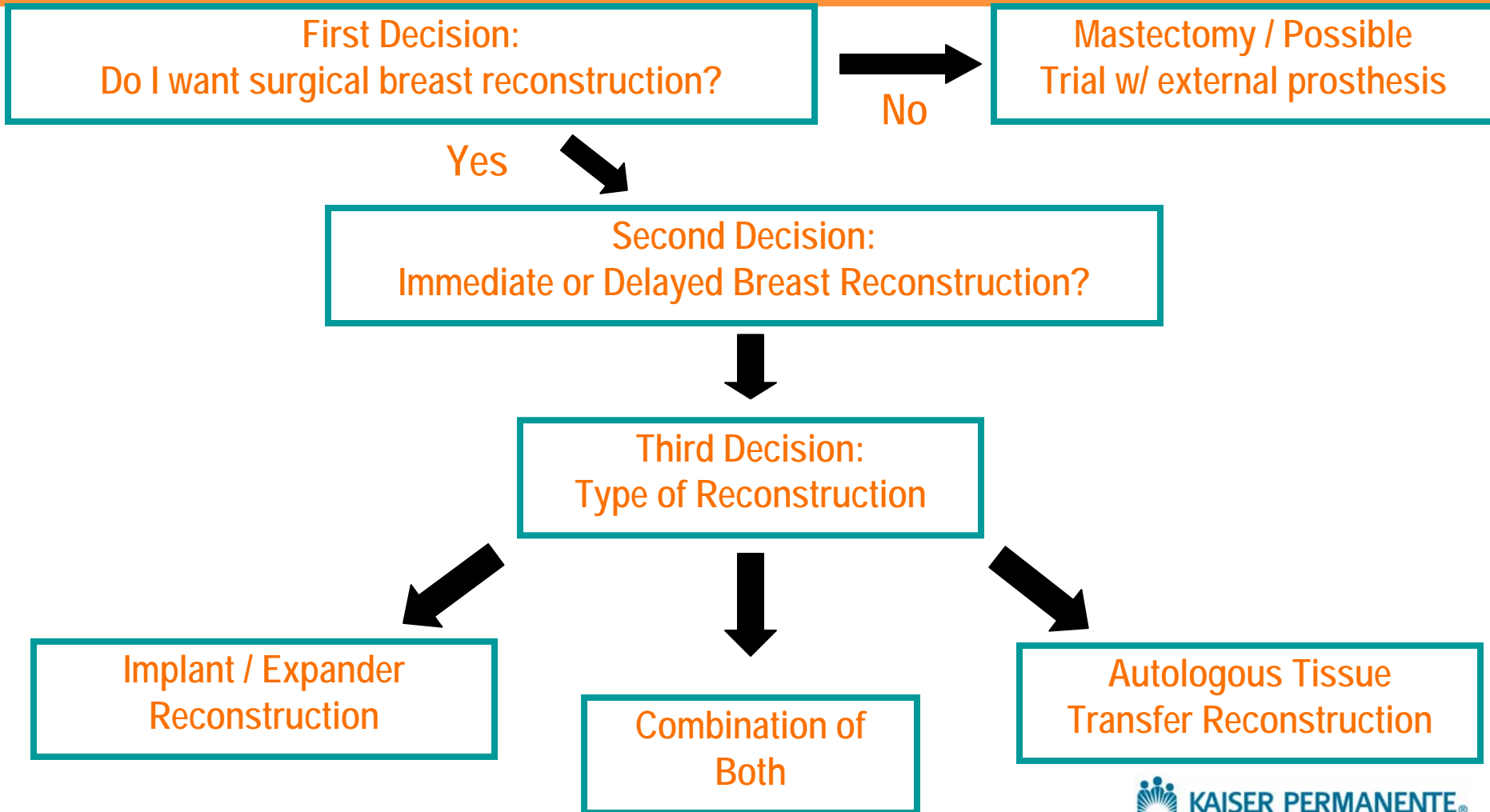
Generally two reasons:

If a patient is unsure if she wishes to undergo breast reconstruction at all or which type of reconstruction to undergo.

- There is no medical rush to undergo breast reconstruction
- Likely better understanding of reconstructive options when not also dealing with the initial diagnosis of breast cancer itself

If a patient has advanced disease or it is known prior to mastectomy that she will need post-operative radiation

# Surgical Breast Reconstruction Road Map



# Implant / Tissue Expander (TE) Reconstruction

## Basic Premise:

- The breast tissue removed and the cavity created by mastectomy is replaced with an internal implant to recreate the form of the breast.
- If a significant amount of skin is removed, a tissue expander is placed to stretch the remaining skin into the form of a breast over time.
- After tissue expansion is completed and post-operative swelling has resolved the tissue expander is replaced with a permanent internal silicone or saline implant.



# Advantages of TE / Implant Reconstruction

- It is a relatively simple procedure
- No significant increase hospital stay or recovery compared to mastectomy alone
- If overlying skin is adequate and tissue expansion is not necessary, immediate implant reconstruction can possibly be performed as a single reconstructive procedure. (Only a few patients are candidates for single procedure)
- Generally good symmetry match compared to opposite breast (there are a lot of implant options)
- Surgery and scars are located only in and around the breast area where treatment of cancer has occurred
- No need for external prosthesis

# Disadvantages of TE / Implant Reconstruction

- The breast generally does not feel as natural to the outside hand or move as naturally as autologous tissue transfer reconstruction (discussed next)
- Capsule formation (internal scar) and possible contracture (thickening or tightening) with time
- Man-made prosthesis with risk of rupture / infection
  - If wound infection occurs, need for removal is a high risk
  - Risk of rupture (generally about 1-2% increase risk per year )
- Rippling of implant can sometimes be seen if placed under thin overlying skin
- Higher need for revision in the future
- Higher need for opposite breast surgery ( lift / reduction / augmentation) to improve overall symmetry
- Not a good option for pre or post operative radiation patients

# Autologous Tissue Transfer Reconstruction

## Basic Premise:

- Excess or redundant tissue elsewhere on the body (donor site) is used to recreate the form of the breast
- Fat or muscle of the donor site is used to make up for the tissue taken during mastectomy
- Skin from the donor site can be used to make up for the skin taken during mastectomy
- Additional skin can be used from the donor site if necessary to remove damaged previously irradiated skin
- If a patient does not have a significant amount of tissue for breast reconstruction but has skin loss or radiation damage, autologous tissue transfer can be combined with implant reconstruction for overall breast reconstruction

# Autologous Tissue Transfer Reconstruction

## Challenge:

- Tissue can not just be taken from the donor site and simply moved up on the chest for breast reconstruction
- Blood supply must be maintained or reconstituted to keep the tissue alive

## Two options to do this:

- Tissue blood flow is maintained by a vascular leash (pedicle)
- Tissue blood flow is reconstituted by micro-vascular technique (Free tissue transfer)

# Advantages of Autologous Tissue Transfer Reconstruction

- More natural feel and mobility of the reconstructed breast
- Less “revision rate” over patient lifetime
- No “man-made” implant, therefore no risk of rupture and other problems associated with implants
- Less need for opposite-side breast surgery (although still possibly necessary to improve symmetry)
- Better option for post-operative radiation patients

# Disadvantages of Autologous Tissue Transfer Reconstruction

- Much more complicated and long procedure
- Significant increase hospital stay (5-7 days versus overnight for mastectomy alone or TE/implant reconstruction)
- Significant recovery period (6-12 weeks versus 2-4 weeks for mastectomy alone or TE/implant reconstruction)

## Potential donor site problems:

- Scarring
- Muscle weakness
- Infection
- Bulge for TRAM procedures (abdomen donor site)
- Potential for complete flap loss ( 1-4 % )
- Not everyone is a candidate

# Questions?

## More Information Resources

See on-line video for breast reconstruction:

<http://www.kp.org/mydoctor>

1. Put in your general surgeon's name.
2. You will be directed to their home page
3. On their home page, hit the "Prepare for your Procedure (Emmi)" link on the left hand column
4. Once at the link, Choose "Breast Reconstruction"