AxoGen®
Nerve Regeneration

SURGICAL SOLUTIONS FOR NERVE RECONSTRUCTION

Introduction to Breast Reconstruction

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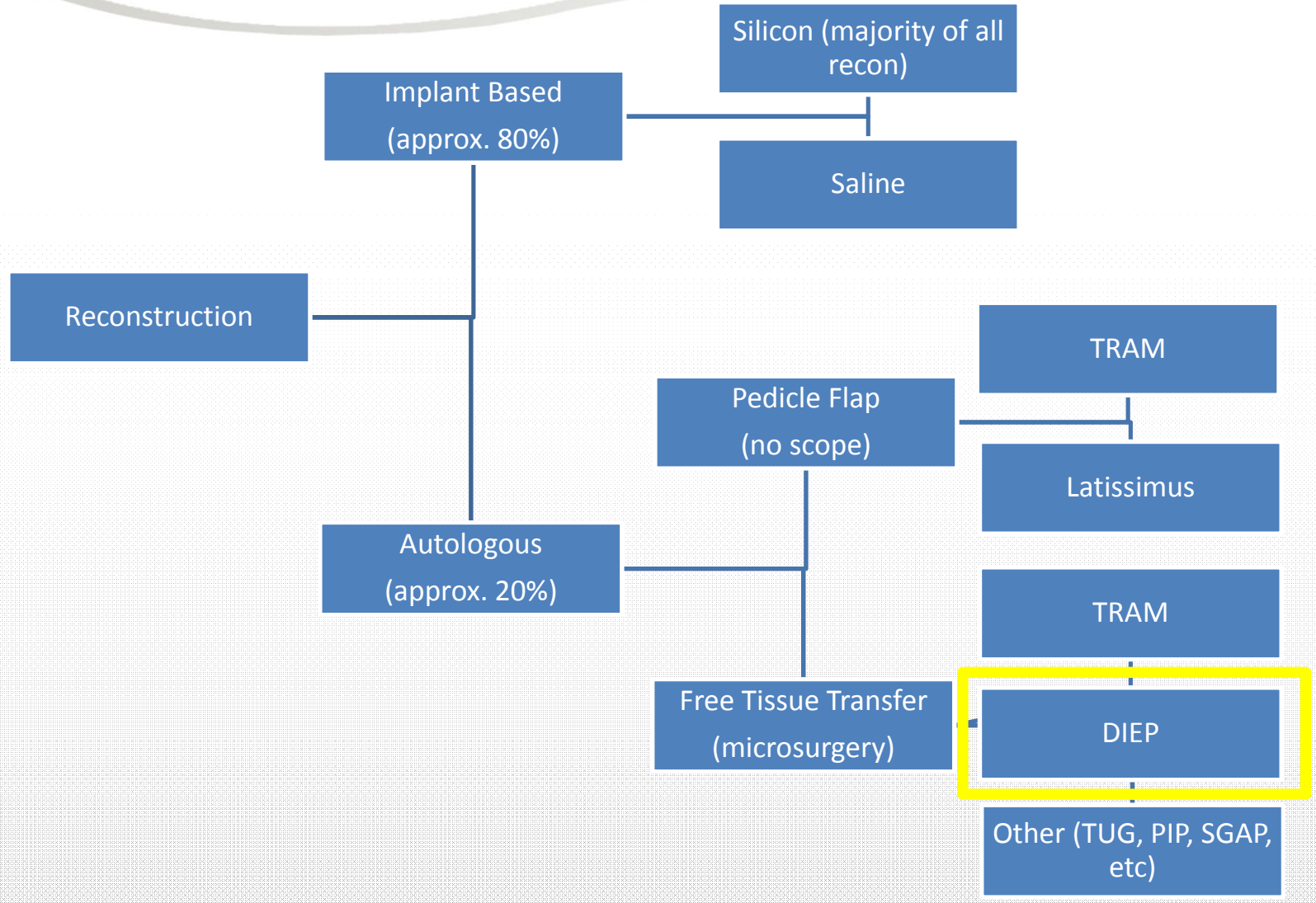
SURGICAL SOLUTIONS FOR NERVE RECONSTRUCTION

The Women's Health and Cancer Rights Act of 1998 legally provides, by federal law, a women's right to breast reconstruction post mastectomy.

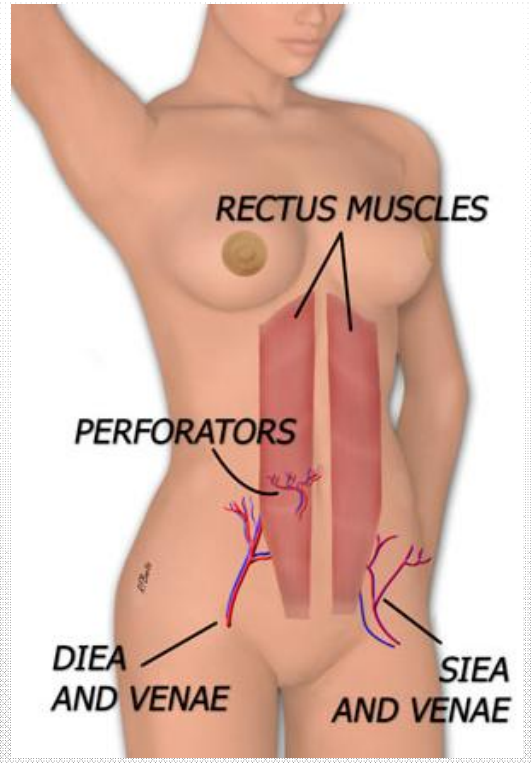
"OF THE 91,655 WOMEN WHO HAD RECONSTRUCTION LAST YEAR IN THE UNITED STATES, A VAST MAJORITY OPTED FOR IMPLANTS, WITH 64,114 CHOOSING SILICONE AND 7,898 CHOOSING SALINE, ACCORDING TO THE AMERICAN SOCIETY OF PLASTIC SURGEONS. JUST OVER 19,000 WOMEN CHOSE AUTOLOGOUS TISSUE TRANSFER." (Source: NY Times, May 20th 2013 "No Easy Choices on Breast Reconstruction")

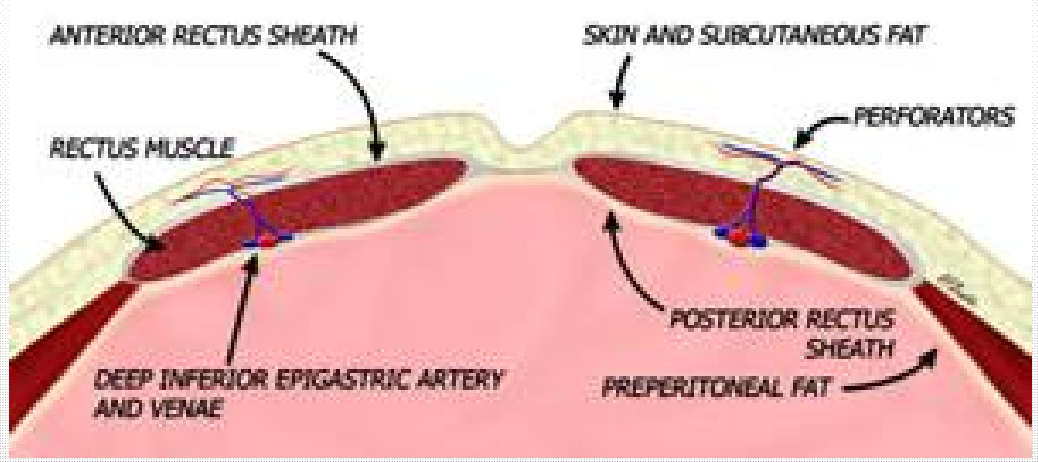
Reconstruction Options



Torso Anatomy

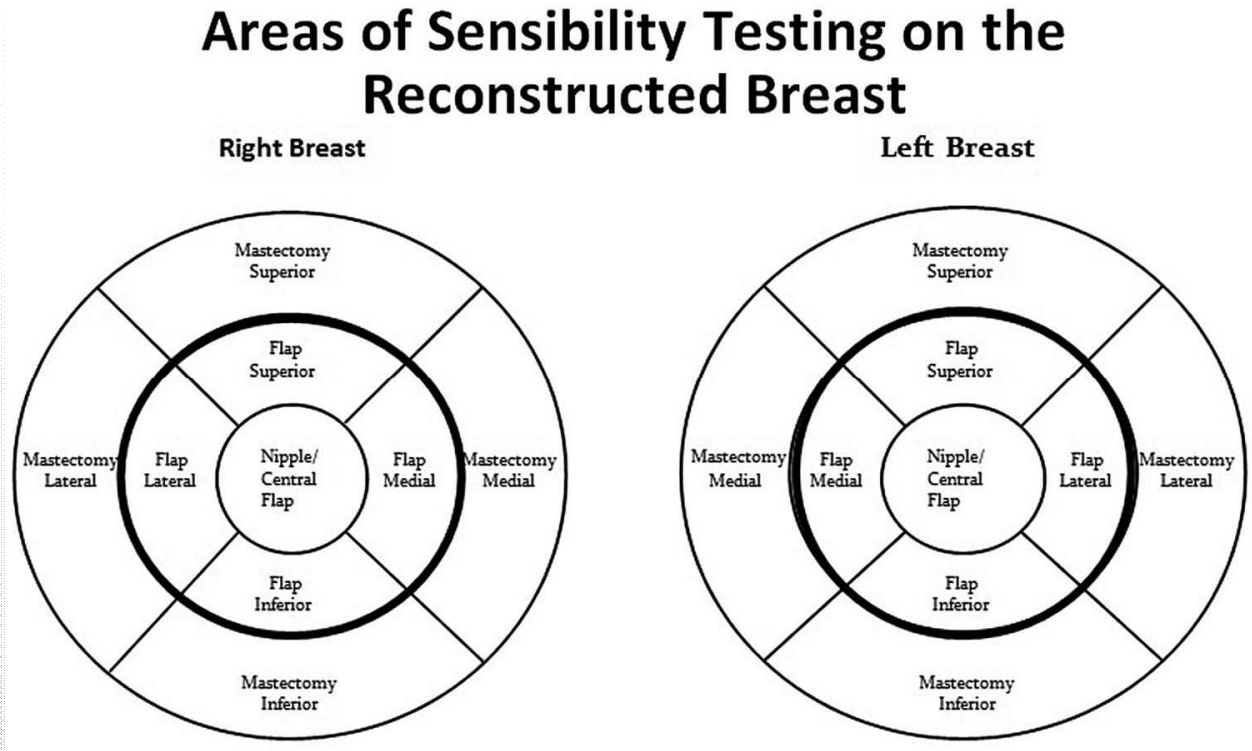
- Intercostal nerves run along the rib cage
- Epigastric vessels run submuscular
- There are a lateral and medial row of perforators on each side of the rectus
  - Some are more dominant
  - They travel from deep to superficial through the muscle and into the skin





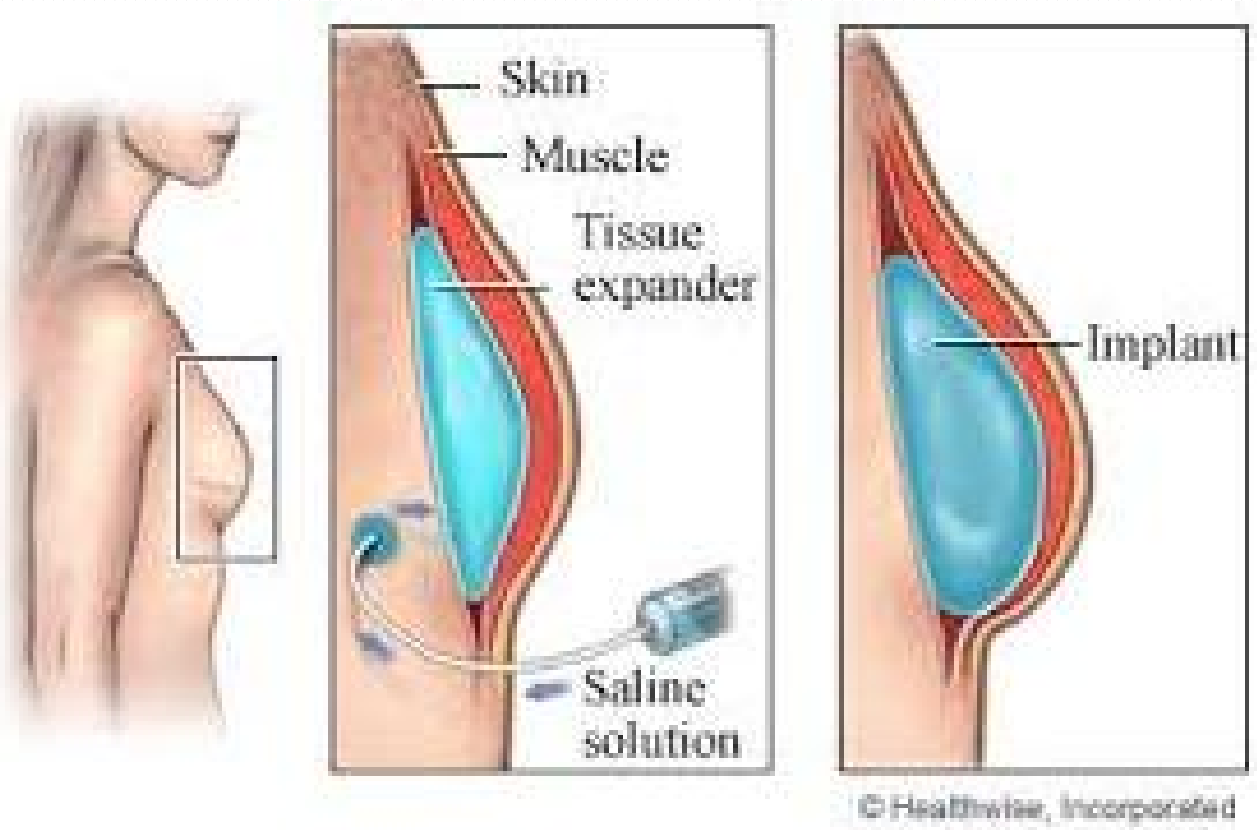
Evaluation of Sensation

- 2 Point Discrimination
- Pressure Specified Sensory Device (Sensory Management Services, LLC)
- Sensation is considered to be a physiological and psychological benefit

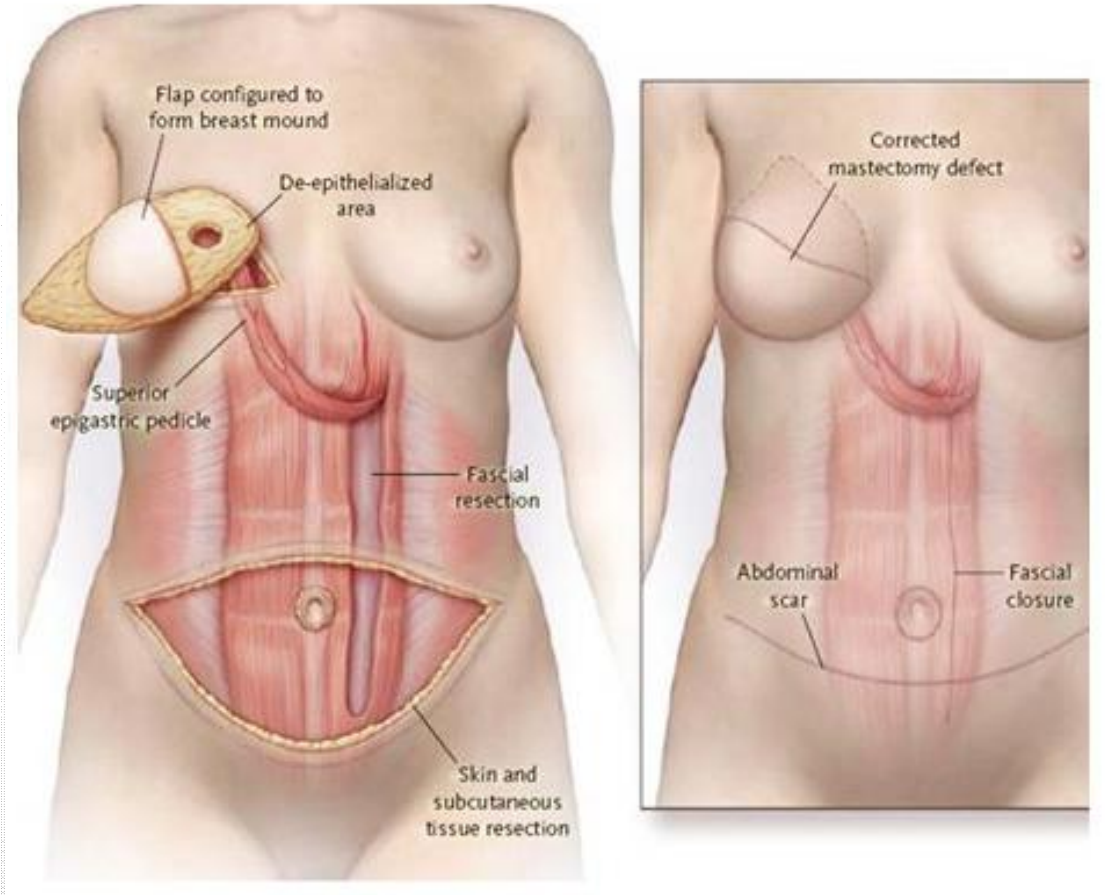


Implant Based Reconstruction

- If additional skin coverage is needed, allograft skin (ex. Alloderm) is most frequently used.
- There is not anything to innervate.



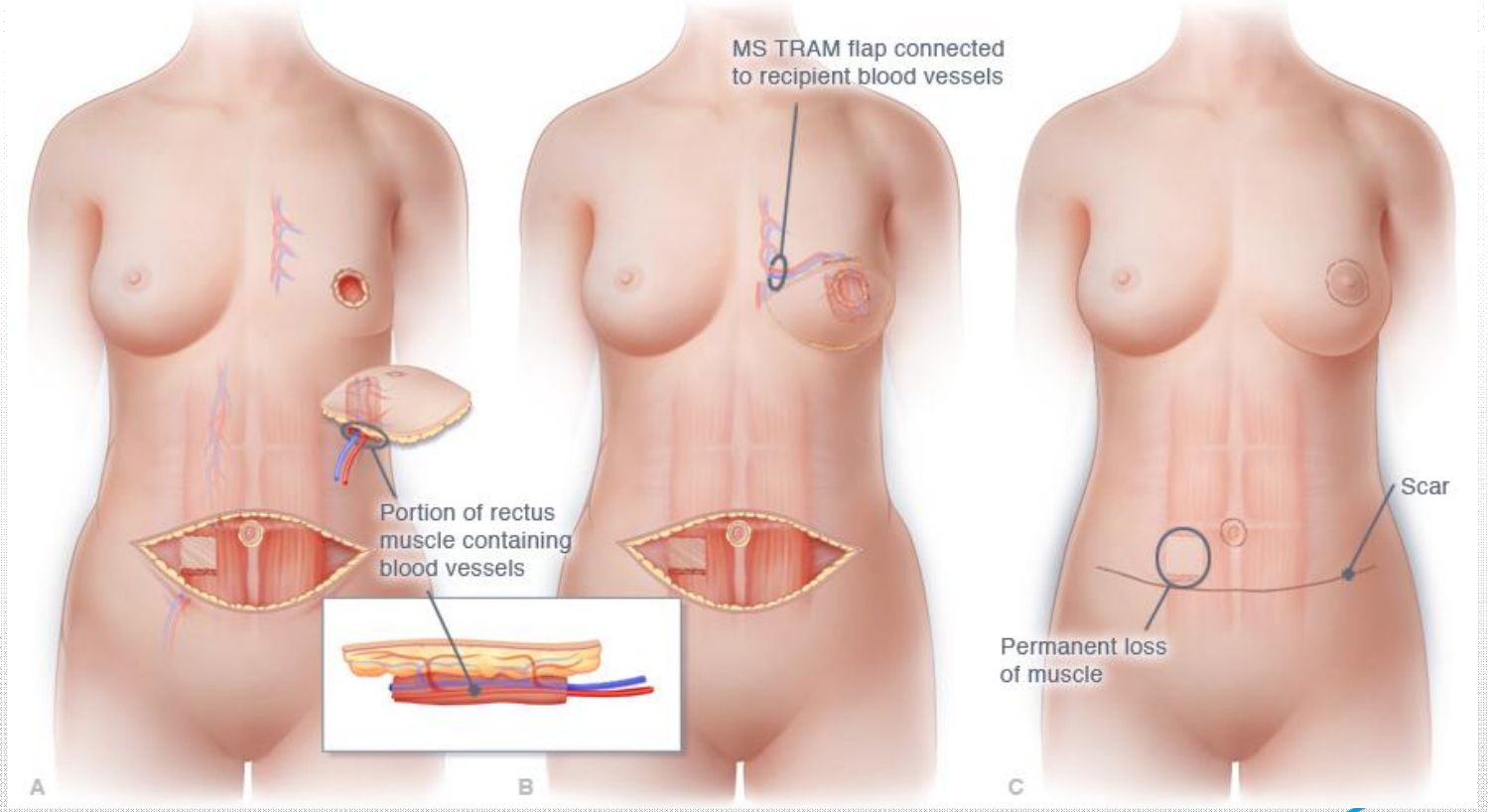
Pedicled Flaps



- These procedures will NOT be set up for microsurgery
- TRAM (transverse rectus abdominus myocutaneous) is the most common
- The superior epigastric is used for dominant blood flow
- Peripheral sensory innervation will occur naturally
- Flap is “tunneled” and shaped into the breast mound
- The flap does include some amount of muscle

TRAM Free Flap
(Can be "Muscle Sparring")

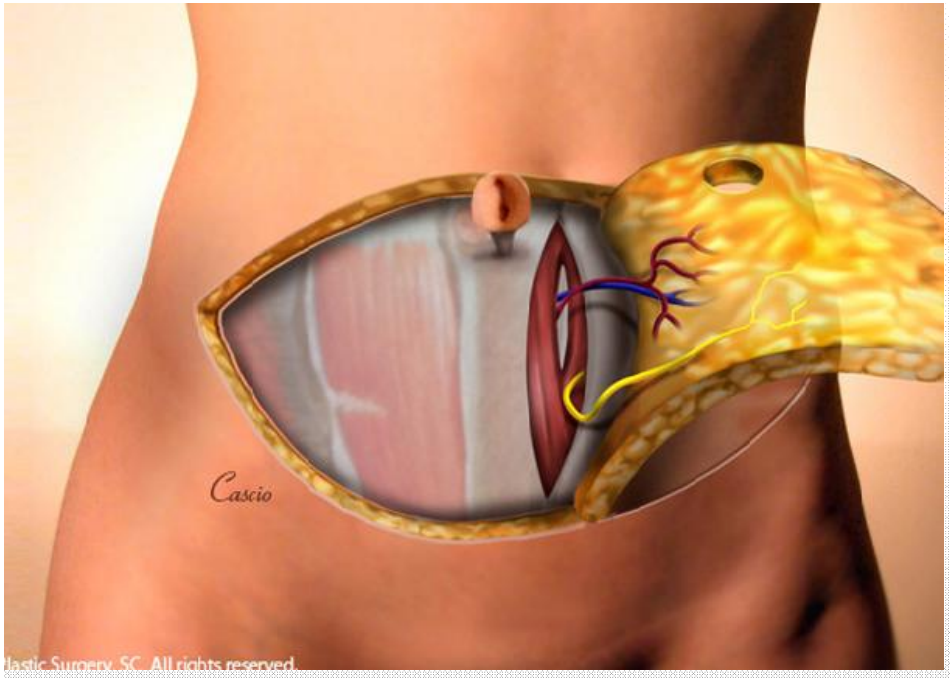
- These procedures will be set up for microsurgery
- The inferior epigastric is used for dominant blood flow
- Peripheral sensory innervation will occur naturally
- Perforators and muscle are NOT dissected and the nerve is NOT exposed

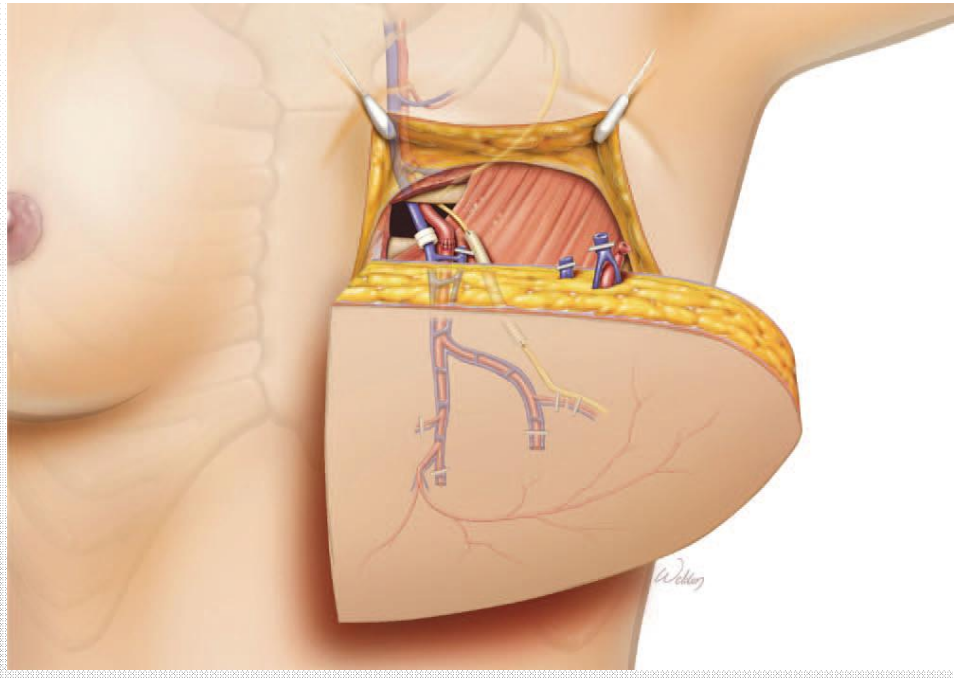


DIEP Free Flap

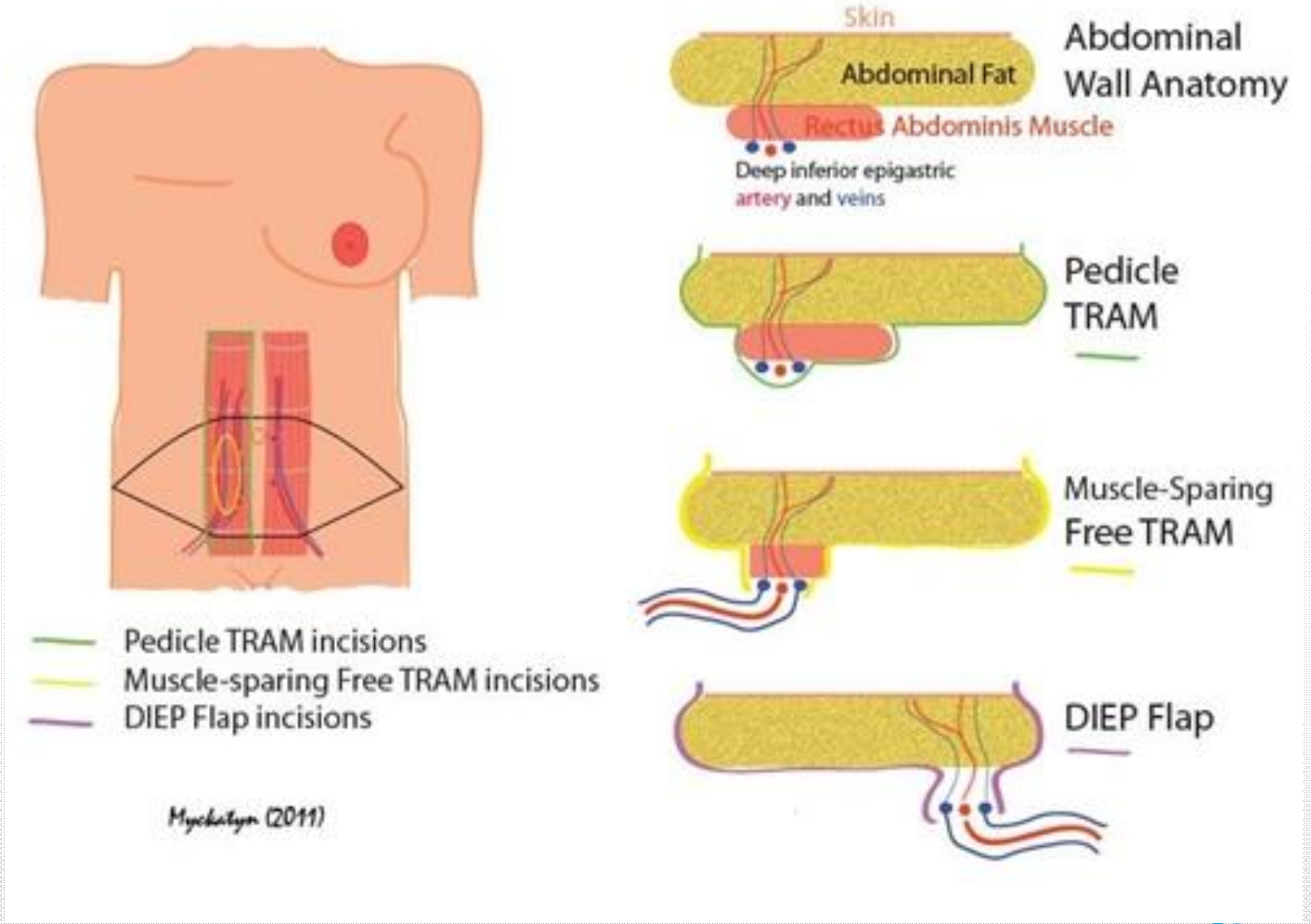
(pronounced “deep”)

- These procedures will be set up for microsurgery
- Blood supply is the deep inferior epigastric via the perforators
- Dominant perforators are selected and dissected out
- Muscle is not removed and the fascia may be closed
- The nerve in the middle of the flap is accessible





Understanding TRAM vs DIEP



Considerations

- Targeting
- Surgeons' reconstruction method of choice
- Procedure time
- Sizes
- Possible competition
- Training and technical ability
- Payments and reimbursement
- Evolution of the market
- Patient population and demographics