The Island Pedicle Flap:
Versatile and Dependable

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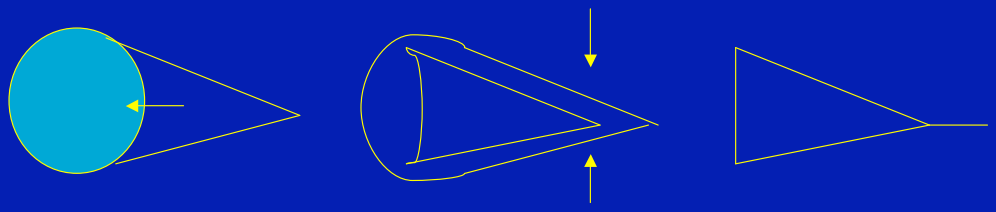
The Island Pedicle Flap (IPF)

- Specialized advancement flap
- "Island" is created when skin is completely incised on all 3 sides
- Rich vascular supply comes from subcutaneous/ muscular pedicle
- Exceptional flap viability and mobility
- Synonyms: V to Y, Kite flap

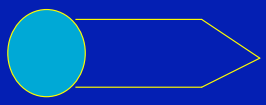
IPF Design



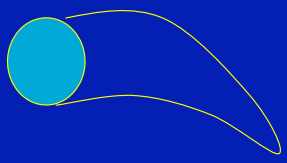
- Key suture to advance flap is often primary tension vector
- Secondary tension vector to close secondary defect
- Designed such that primary and secondary flap movement will not cause anatomical distortion

Island Pedicle Flap Design

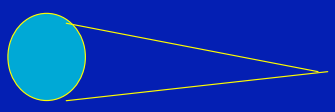
- Lengthen- pentagonal shape



- Curve



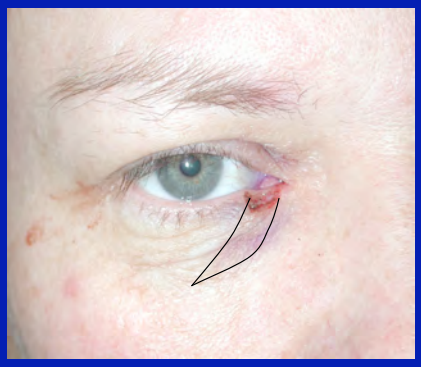
- Tapered



Island Flap Movement

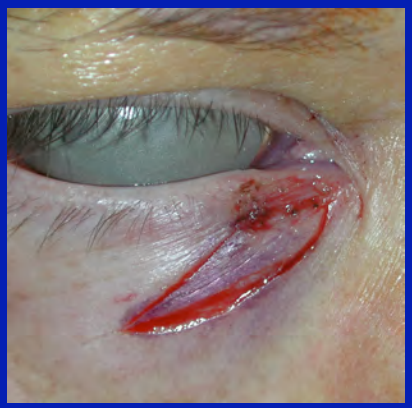
- Usually linear
- Flipped 30-180 degrees
- Tunneled

IPF Technique**



***Design is 90% of an excellent outcome*

- Incise flap vertically through full thickness of skin



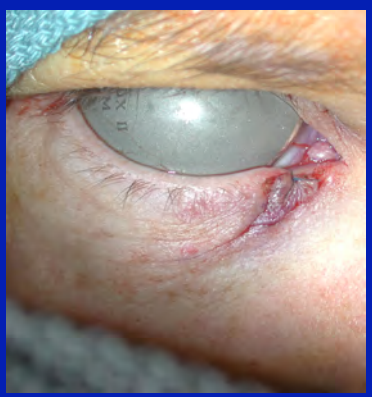
IPF Technique

- Free advancing edge and distal third so as not to limit movement

- Undermine flap vertically using a spreading technique

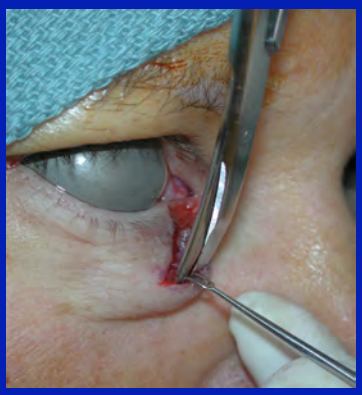
IPF Technique

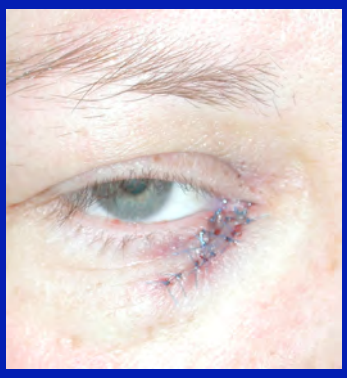
- Advance flap into place and secure leading edge with key suture



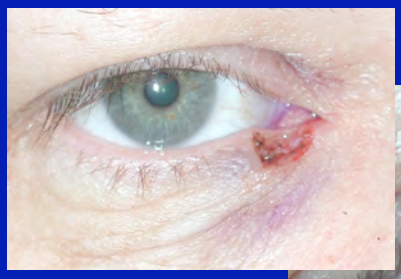
IPF Technique

- Undermine defect wound margins in mid fat
- Achieve hemostasis
- Approximate flap slightly below plane of surrounding skin





IPF Technique

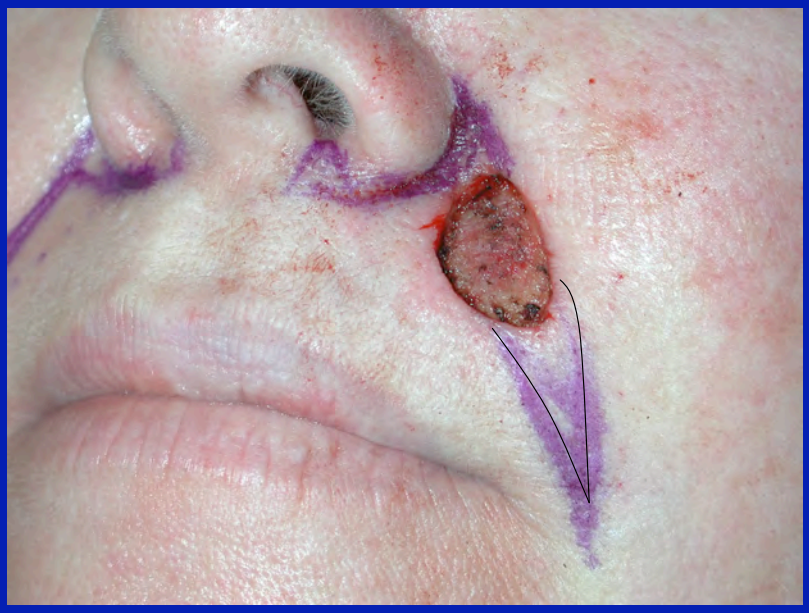


When to employ the IPF

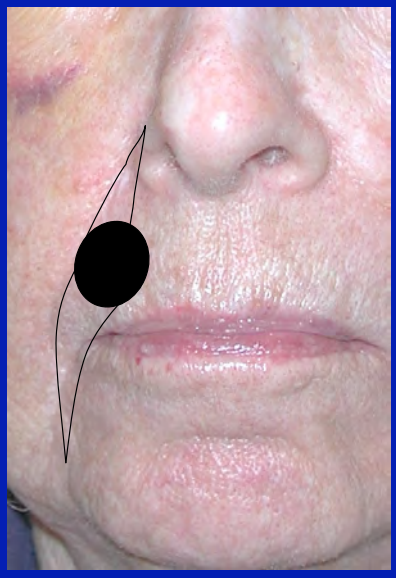
- Due to conspicuous kite design, best used in areas where one flap limb can be camouflaged in cosmetic jctn line, wrinkle, hairline
  - Lip-cheek-nose junction
  - Alar crease
  - Eyebrow

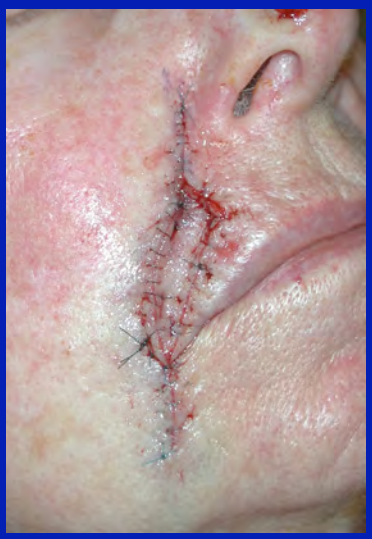
Key Advantage of IPF

- Tissue sparing aspect is unsurpassed
  - When primary closure is *almost* an option (undue tension may cause distortion), standing cone may be useful to close rest of defect



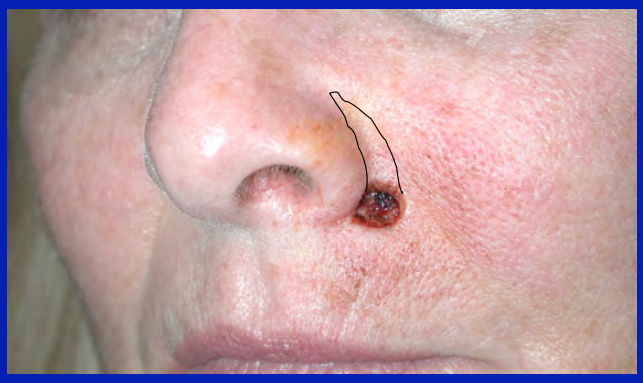
Classic location for IPF





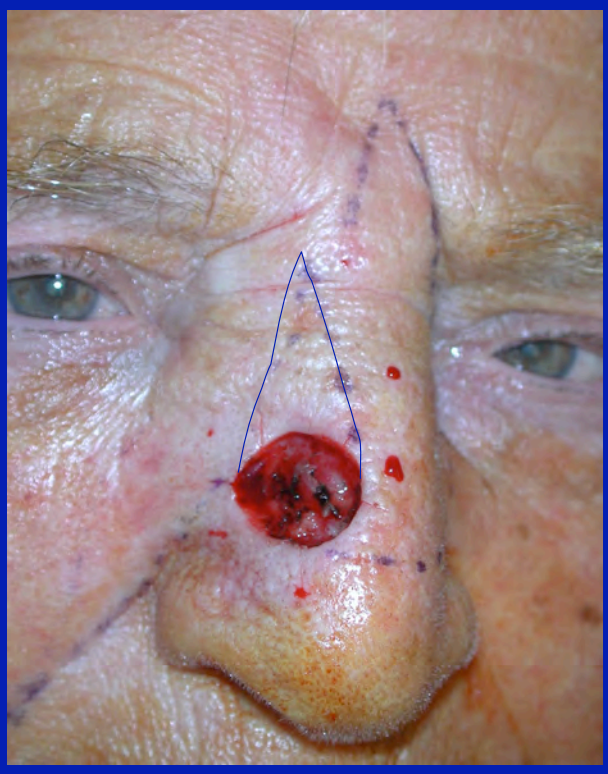
Partial closure/ Partial IPF

-Too large for linear; flap crosses cosmetic jctn; better match than graft



Primary repair would shrink area of lip isthmus causing distortion

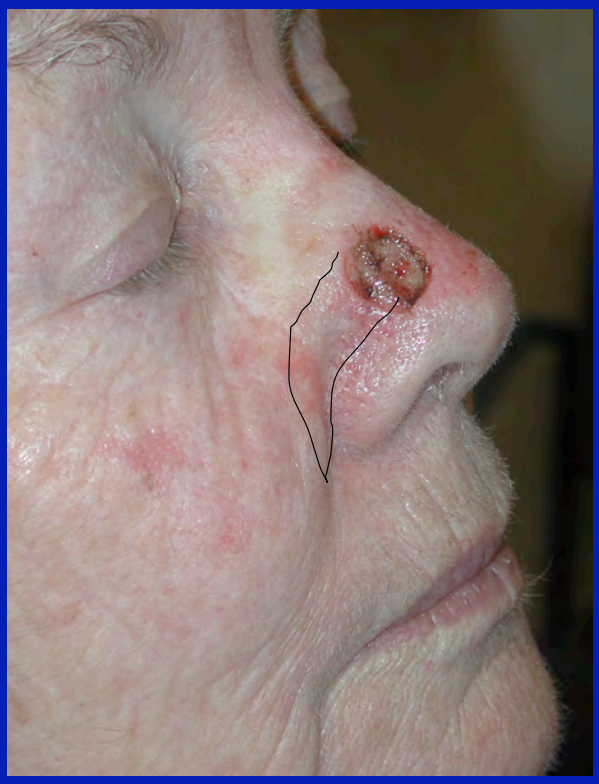
IPFs on nose are usually small-tissue is less elastic and minimal muscle for pedicle fomration



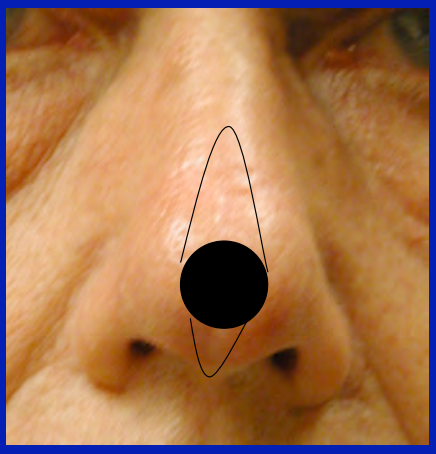
Older patients, with more skin laxity, may allow for larger IPF on nose

Curved IPF

-especially helpful for deep defects

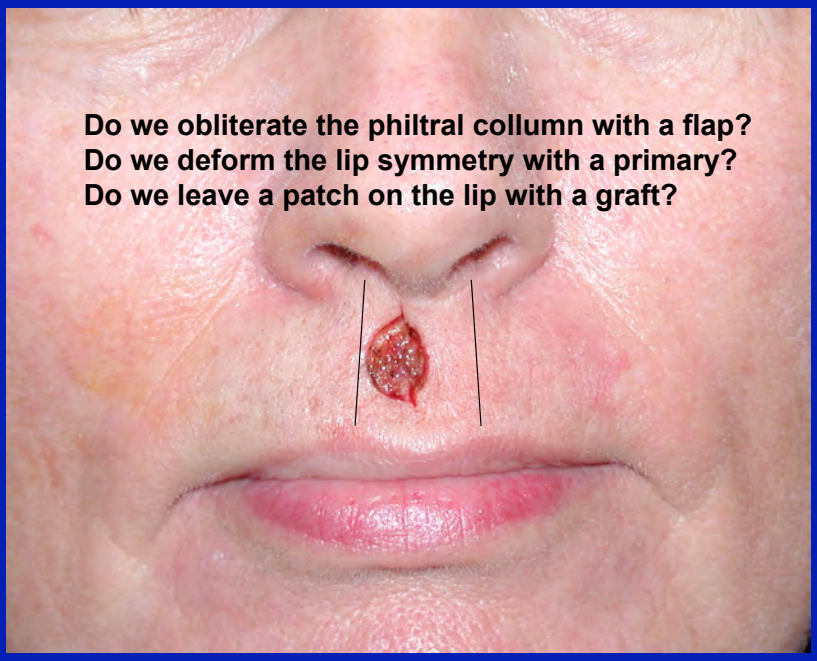


What would you do??

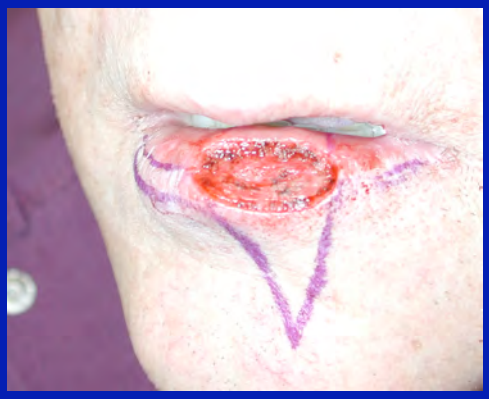


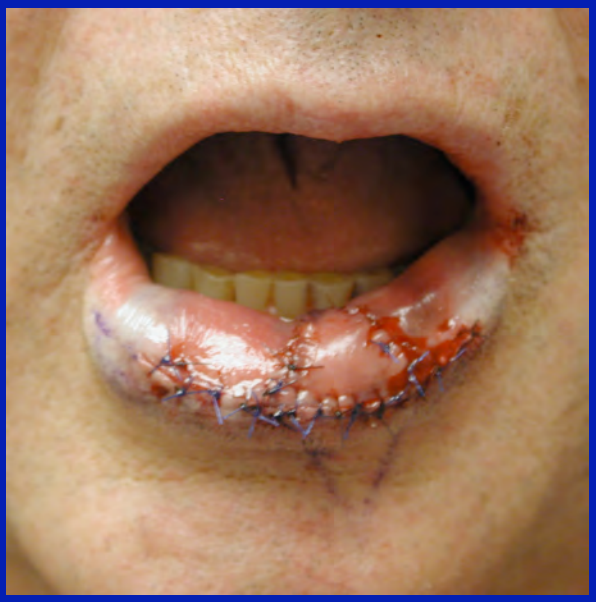
Can’t do a a primary without blunting the nasal tip

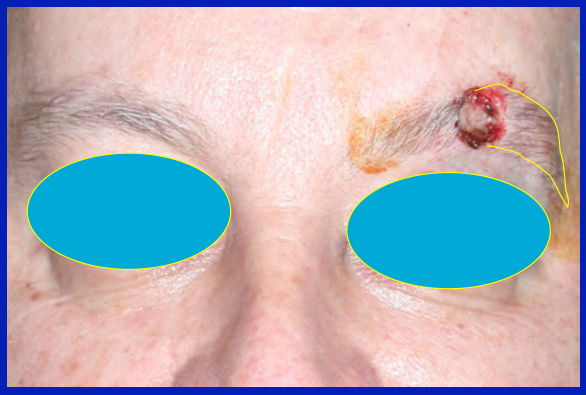
What would you do??

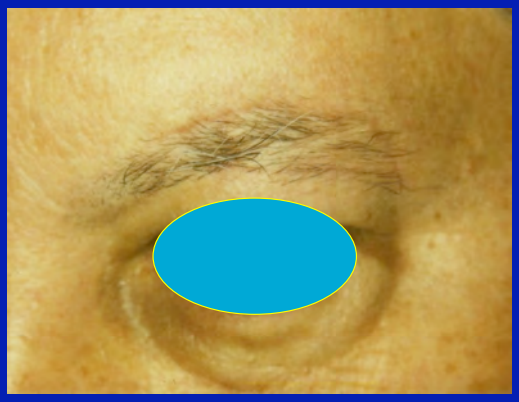


Mucosal IPF

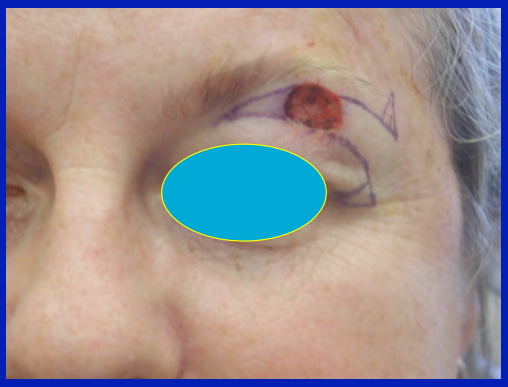


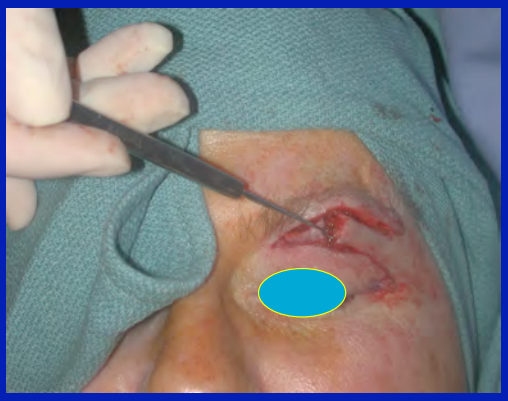






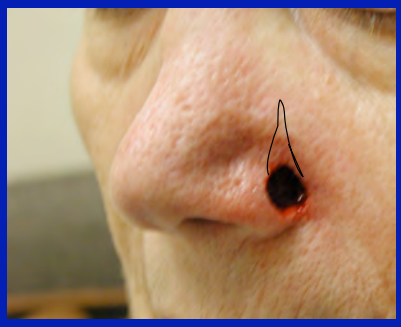
Unilateral Advancement Flap/ IPF



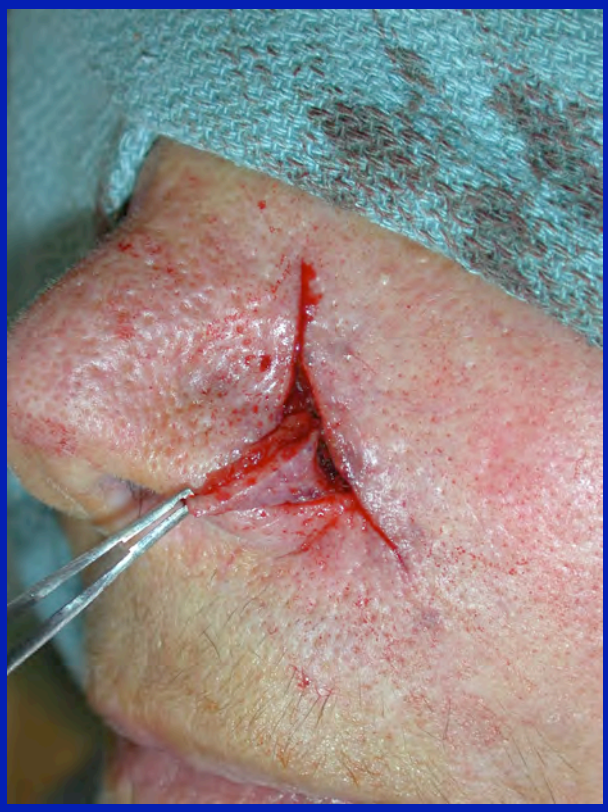


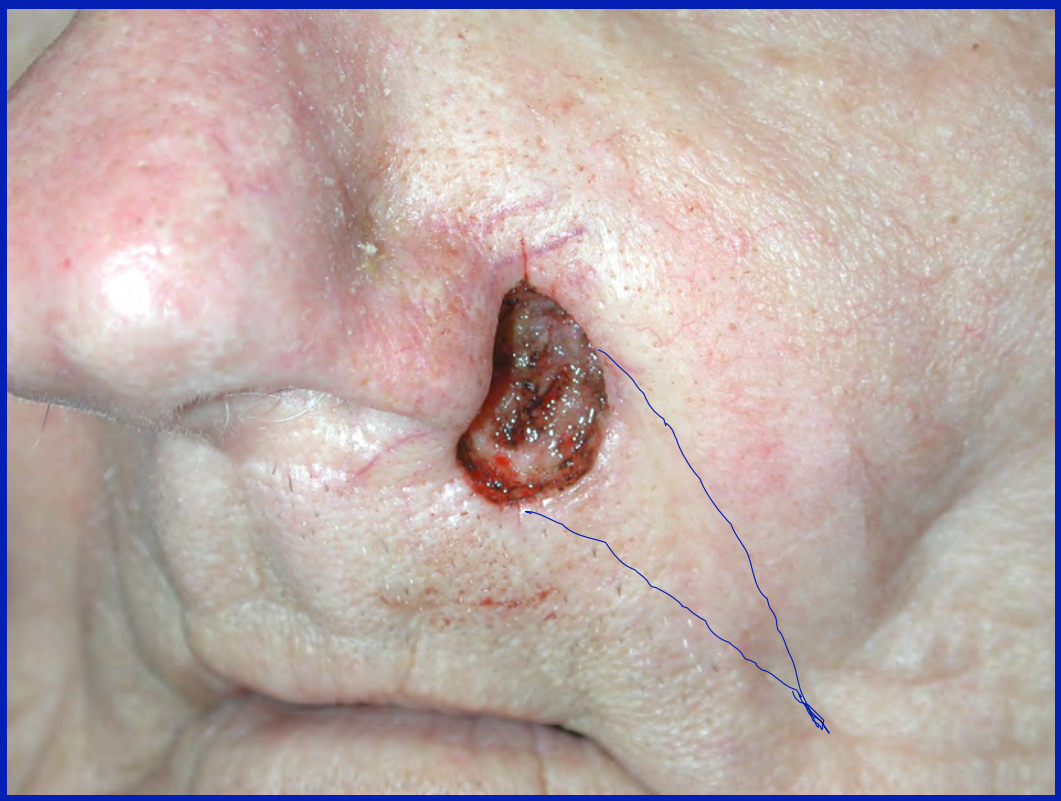
Modifications of IPFs

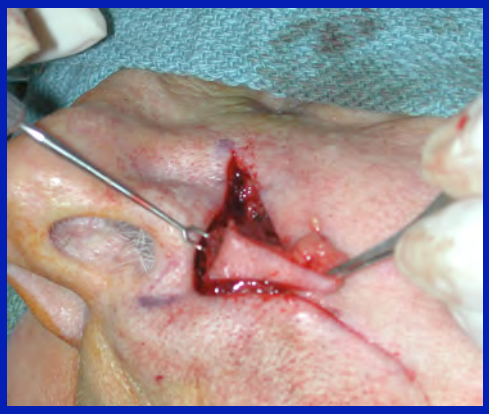
- **Flipped IPF**
- Tunneled IPF
- Curved IPF
- “Pop Up” flap

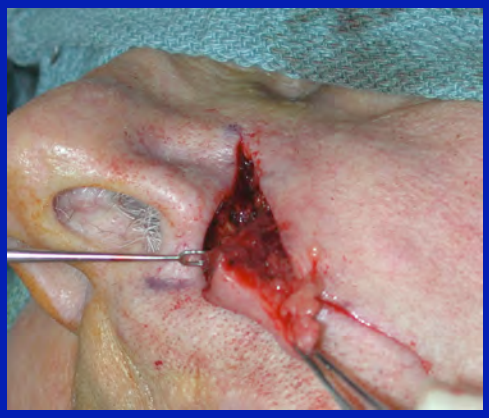


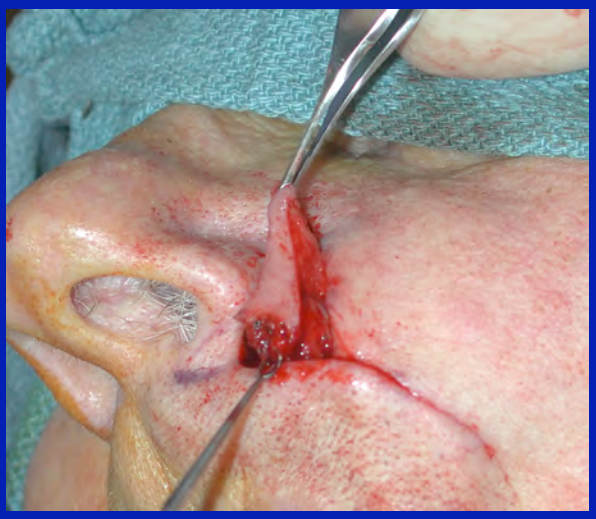
Flipped IPF
-to close
adjacent
subunit

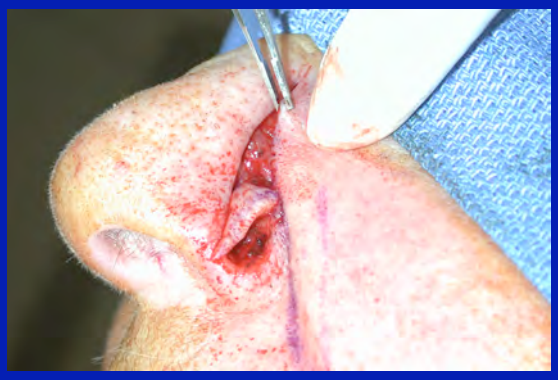


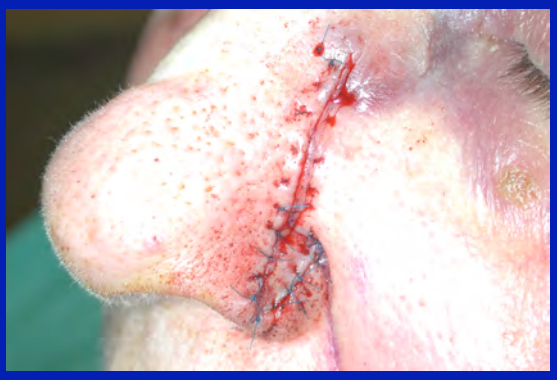


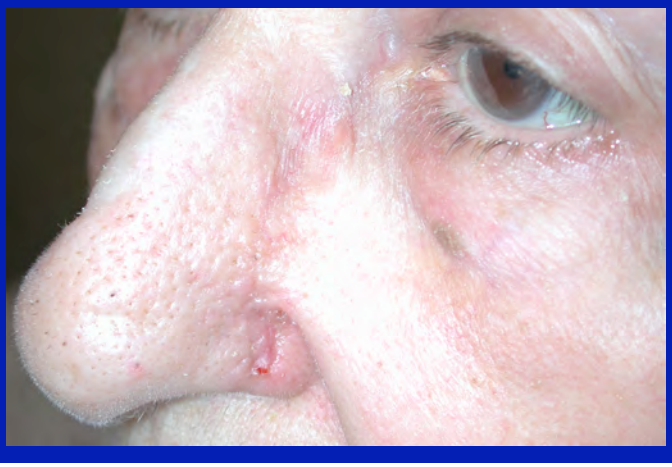


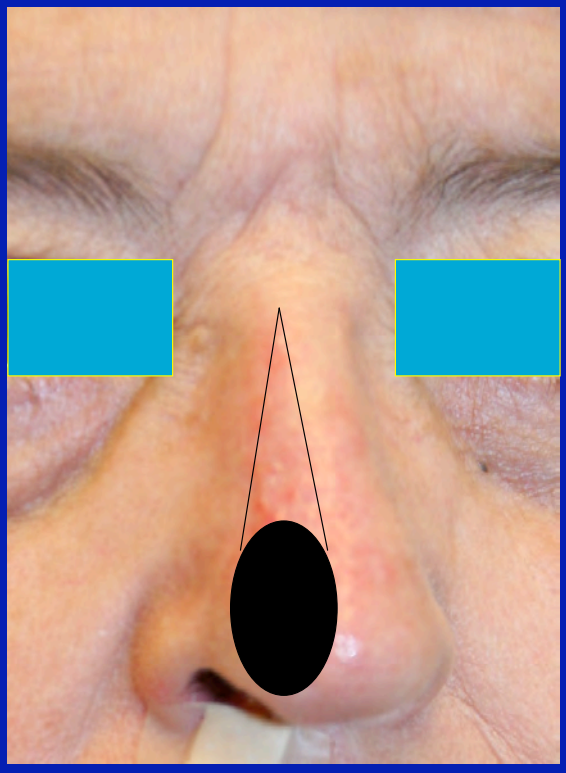


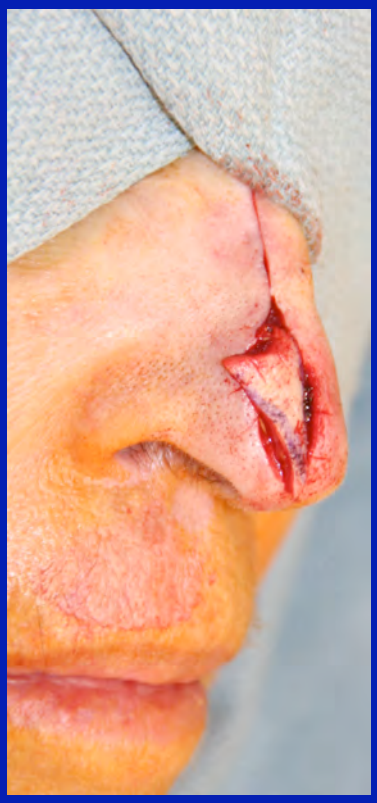


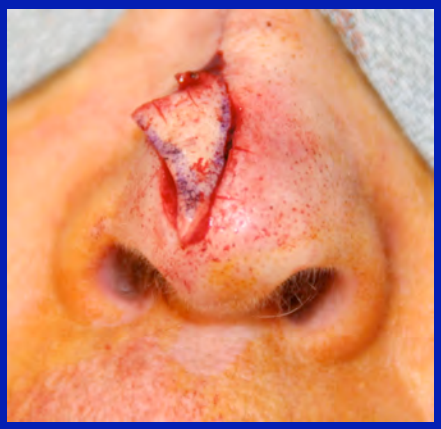


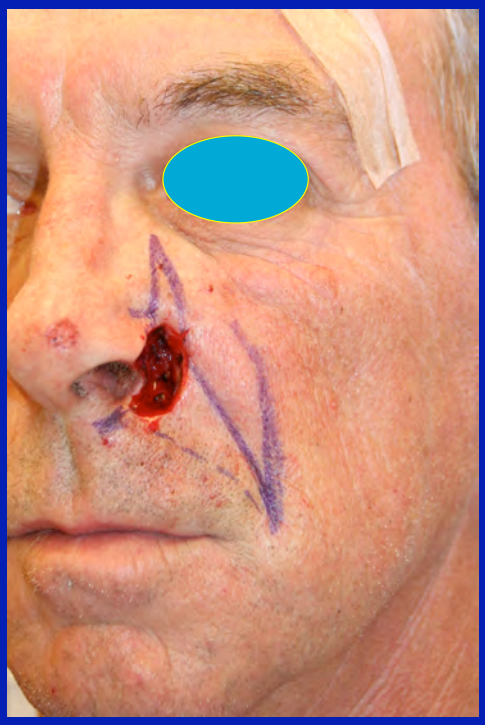


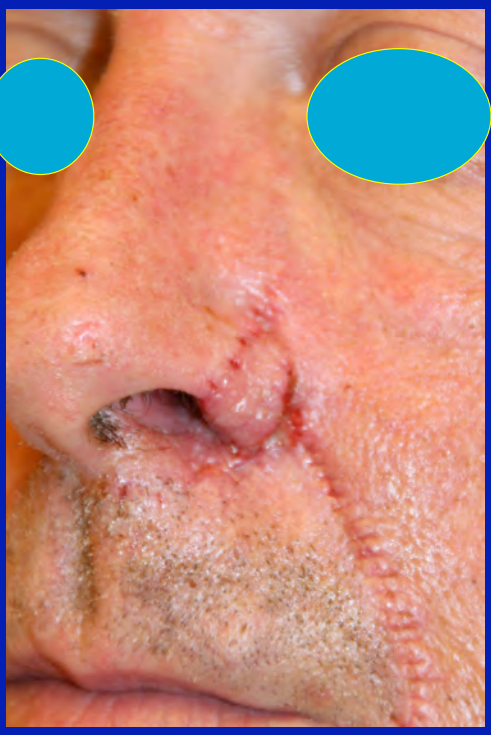












When to use an IPF

- Deep defect (takes all layers of tissue with it)
- Junction lines and RSTLs where kite design can be hidden
- To advance hair bearing skin
- When like skin is needed (vs graft)
- Limited tissue reservoir may cause distortion

Advantages of IPF

- Like skin
- Tissue sparing
- High viability; robust blood supply
- All tissue layers

Limitations of the IPF

- Trapdooring
- Areas with inadequate subdermal pedicle and poor mobility
  - Radiated, burned, scarred skin
  - Nasal dorsum
- Kite Design

IPF Technique Pearls

- Be sure secondary defect can be easily closed side to side
- Slightly undersize flap
- Inset flap
- Undermine vertically/deeply
- Free one third of tail of flap
- Free several millimeters of leading edge to prevent inversion