# FACIAL PLASTIC AND RECONSTRUCTIVE SURGERY

1. **Brief description of training**
   Exposure to clinical facial plastic and reconstructive surgery (FPS) is provided in both the PGY 2 and PGY 5 years. Each is based at Massachusetts Eye and Ear.
   - MEE FPS Rotation – PGY 2 and PGY 5 years
     - This involves both clinic and operative experience.
     - All residents are involved in facial trauma regardless of level in training

2. **Core basic science knowledge**
   - Thorough working knowledge of gross anatomy of the head and neck region
     - Including the nose, scalp, ears, eyelids, bony skeleton, and the facial nerve
   - Knowledge of the basic physiology of skin, wound healing, skin grafting, local flaps and free tissue transfer
   - Understand the changes that occur to the skin with aging, solar damage, resurfacing, and tissue expansion
   - Understanding of the embryologic development of the face, nose, and ear

3. **Core clinical knowledge**
   Pathogenesis, pathophysiology, psychology, and treatment of various facial plastic and reconstructive disorders
   - Microtia and auricular deformities
   - Trauma- both bony and soft tissue injury
   - Cutaneous malignancy and benign lesions and local flap reconstruction
   - Congenital and traumatic nasal deformity
   - Nasal obstruction
   - Facial paralysis/paresis
   - Aging face
   - Scars/scar revision
   - Lasers
   - Wound healing
   - Craniofacial anomalies
   - Skin Resurfacing
   - Hair Restoration

   Diagnosis and Management of FPS emergencies
   - Hematoma after rhytidectomy
   - Epistaxis after rhinoplasty/nasal reconstruction
   - Septal hematoma/abscess
   - Retro-orbital hematoma after blepharoplasty/eyelid procedures
   - Microvascular free flap failure

4. **Diagnostic skills**
   - Ability to obtain a thorough history

- Ability to complete a full otolaryngological physical examination
- Ability to obtain a focused FPS history
- Ability to complete a focused FPS examination
- Ability to evaluate and interpret additional diagnostic tests
    - Imaging studies
    - Photographic documentation
- Ability to create a rational differential diagnosis for various facial plastic and reconstructive problems

**5. Medical management**

- Understanding the prevention of certain facial plastic and reconstructive problems
- Understanding medical management of various facial plastic and reconstructive problems
- Allergic and non-allergic rhinitis
- Nasal valve collapse
- Facial paralysis rehabilitation
    - Physical therapy
- Develop proper referral skills
    - Allergy
    - Dermatology
    - Head and neck surgery
    - Neurootology
    - Oral and maxillofacial surgery
    - Oculoplastic surgery
    - Pain medicine
    - Psychiatry/psychology
    - Rhinology

**6. Surgical skills**

- Competence in assessing patient candidacy for surgical treatment of facial plastic and reconstructive issues
    - Appropriate patient selection
    - Assessment of co-morbidities
    - Appropriate pre-operative medical management
    - Appropriate pre-operative testing (i.e. imaging studies, photographic documentation, etc)
    - Assessment of patient expectations
- Competence in preoperative preparation and planning for the planned surgical procedure
- Competence in intra-operative skills for the procedures below
- Competence in management of intra-operative and postoperative complications
- Competence in postoperative care

**Specific Surgical Procedures**

Upon completion of residency training, the resident should be competent in the following facial plastic and reconstructive procedures:

- Closed reduction nasal fracture
- Local and regional flap reconstruction of cutaneous defects
- Full-thickness and split-thickness skin graft reconstruction of cutaneous defects
- Open reduction internal fixation midface fractures
- Facial reanimation procedures

    - Both static and dynamic
- Rhinoplasty
- Septoplasty
- Nasal valve repair
- Scar revision

Upon the completion of training, the resident should have a working knowledge of, but may require additional training before independently performing, the following procedures:

- Rhytidectomy
- Blepharoplasty
- Brow lift
- Genioplasty/mandibular procedures
- Facial implantation
- Otoplasty/Microtia repair
- Microvascular free flap reconstruction
- Injectable fillers and Botox
- Skin Resurfacing

**7. Graduated experience**

A graduated experience and increase in responsibility are expected with advancing years of ORL training. The resident will assume increasing responsibility for diagnosis, medical management, and surgical treatment for facial plastic and reconstructive problems.

By the end of the **PGY-2 year,** the resident should be able to demonstrate:

- Competence in basic diagnostic skills, basic science and clinical core knowledge in FPS, as well as understanding of true emergencies in this field
- Ability to clinically and radiologically evaluate a facial trauma patient, to recognize common fracture types, recognize when it is appropriate to intervene surgically, and appropriate consultation for patient management
- Able to perform surgical approaches to visualize a midface fracture and provide appropriate exposure for ORIF
- Ability to analyze the nose in terms of both cutaneous reconstruction and rhinoplasty
- Ability to analyze the face in terms of subunit analysis and (aging/congenital) deformities
- Basic familiarity with the use of facial plastic and reconstructive surgical instruments
- Competence in performance of closed reduction nasal fracture
- Performs limited dynamic nasal function analysis
- Ability to discuss appropriate incision placement for open rhinoplasty and understands common complications of rhinoplasty
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By the end of the **PGY-5 year,** the resident should be able to demonstrate:

- Competence in the evaluation and treatment planning for cutaneous defect repair
- Competence in the evaluation and treatment planning in patients with facial paralysis
- Competence in the performance of open rhinoplasty including appropriate pre-operative evaluation with correlation of examination to underlying structural etiologies and a surgical plan to correct these abnormalities.
- Competence in the performance an uncomplicated midface fracture

**8. Assessement of Skills**
Two OSAT evaluations have been incorporated into the MEE PGY-5 rotation, assessing repair of an open rhinoplasty and a midface fracture. It is each resident's responsibility to assure that the OSAT is completed during the rotation.

**9. ABOto Core Surgical Procedures**
Core surgical procedures that are being assessed by the ABOto, based on the post-graduate year that competency was obtained:

- Basic Rhinoplasty
- Regional Flap Reconstruction of facial defects
- Local Flap Reconstruction of facial defects
- Repair midface and mandible fractures

**10. Educational Conferences in Facial Plastic and Reconstructive Surgery**
Attendance is Mandatory for All Residents

- PGY 2 Cadaveric Dissection Course
- Rhinoplasty and Soft Tissue Course- PGY-2 and PGY-5
- Facial Plastic and Reconstructive Surgery Core Curriculum
- Plating Course
- Facial Nerve Conference
    - Weekly interdisciplinary review and management discussion of difficult/interesting cases
    - Includes a quarterly multi-institutional and interdisciplinary conference

11. Milestones Assessment

- Facial Trauma – Patient Care
- Nasal Deformity – Patient Care
- Please see the below website for details https://www.acgme.org/acgmeweb/Portals/0/PDFs/Milestones/OtolaryngologyMilestones.pdf

12. **Suggested Reading**

- Papel et. al: Facial Plastic and Reconstructive Surgery. Thieme Medical Publishers,
- Applicable readings from AAO-HNS Home Study Course