



UNC DIVISION OF PLASTIC AND RECONSTRUCTIVE SURGERY

Proposed Goals and Objectives for the Integrated Program **Competency-Based, Rotation-Specific, Level-Appropriate**

PGY4 Levels

Plastic Surgery Residency Overview

The plastic surgery residency commences at the PGY1 level and concludes after successful completion of the PGY6 year. In the first year, each resident will spend one month with the plastic surgery service. Otherwise they will participate in a variety of general surgery rotations, similar to that of a categorical general surgery resident. The second year will be comprised entirely of general surgery rotations. Then in the third year, each resident will spend six months with the plastic surgery service and six months in subspecialty electives. During the six months of plastic surgery time, the PGY 3 resident will serve as the daytime consult resident for the ED and for in-patient services, and he or she will learn perioperative management of the plastic surgery patient. The PGY3 resident will work with all three plastic surgery services (Hand/Burn--**PEACOCK**, Breast/Micro/General--**HARTRAMPF**, and Craniofacial/Cosmetic--**FURLOW**), to help coordinate care and assist with signoffs and transitions of care. In the PGY4, PGY5 and PGY6 years, each resident will spend four months per year, rotating on each of the three plastic surgery services.

The HARTRAMPF Service **UNC Breast/Micro/General Reconstruction**

The UNC Breast/Micro/General Reconstruction service will expose the resident to the evaluation and treatment of general plastic and reconstructive surgery issues with a primary focus on breast reconstruction. The full complement of breast reconstructive management and microsurgical reconstruction as well as the management of general plastic surgical complaints such as truncal deformity and wounds will be provided. The faculties of the UNC Breast/Micro/General Service are Drs. Lee, Roughton, and Wood.

PGY4

A. MEDICAL KNOWLEDGE

Breast Cancer

Goal: The resident will achieve **sufficient** knowledge of the evaluation and management of breast cancer, breast reconstruction, microsurgery, and general reconstructive patients.

Objectives:

1. Discusses the evaluation, diagnosis, and surgical care of the breast mass.
2. Describes the evaluation of non-palpable breast abnormalities
3. Discusses the appropriate use of mammography, ultrasound, fine needle aspiration, and stereotactic biopsies
4. Discusses the preoperative staging of breast cancer.
5. Recites the use of preoperative chemotherapy and radiation therapy for breast cancer.
6. Describes the indication for operative management of breast disease, and selection of appropriate surgical procedures.
7. Discusses the adjuvant treatment regimens and indications for their use in breast cancer.
8. Describes the treatment of advanced breast cancer.
9. Recites the screening for breast cancer.
10. Discusses the genetic predisposition to breast cancer and indications for prophylactic mastectomy.

Microsurgery

Goal: The resident will demonstrate **sufficient** knowledge of the principles of microsurgery, and **begin to** master basic microsurgery techniques, including microneural repair and microvascular anastomosis.

Objectives:

1. Explains the use of the operating microscope and the technical aspects of microvascular anastomosis (artery and vein) and microneural repair.
2. Discerns the indications for, the contraindications to, and the techniques for accomplishing replantation of amputated parts. Recognize the techniques of monitoring the success of replantation.
3. Discusses the varying types of blood supply to discrete units of tissue (including arterialized flap, musculocutaneous flap, fasciocutaneous flap).

4. Lists the terms and types of free tissue flaps – skin, skin/muscle, skin/muscle/bone, skin/tendon, muscle alone.
5. Lists in detail the anatomy for harvesting the most common flaps, including latissimus dorsi, rectus abdominis, radial forearm.
6. Discerns the indications for harvesting various flaps and matching donor sites to specific recipient site needs.
7. Discusses radiologic techniques for evaluation of both donor and recipient sites.
8. Discusses the mechanisms and consequences of the no-reflow phenomenon; knows how to treat a failing flap.
9. Discusses the technologic, pharmacologic and physiologic principles of postoperative monitoring of free flaps.
10. Recites the basic physiology of nerve injury (axontomesis, neurotomesis, neuropraxia, Wallerian degeneration) and of nerve healing.
11. Draws the intraneuronal anatomy and anatomic relationships of structures of the major peripheral nerves.
12. Explains the principles of repair of nerve injury including need for nerve grafting, the anatomy of nerve graft donor sites, and the physiology, timing and techniques of primary, delayed primary and late nerve repair.
13. Discusses the principles and techniques of hematologic manipulation of abnormal vascular flow characteristics.
14. Discusses the technical aspects of microsurgery including:
 - a. microscopes – principles, usage
 - b. sutures – types, indications
 - c. microvascular coupling devices
 - d. suturing techniques
15. Discusses the use of electrophysiologic tools in the evaluation of nerve injury (EMG, NCS).

B. PATIENT CARE

Goal: The resident will provide patient care that is compassionate, appropriate, and effective for the treatment of reconstructive surgery.

Objectives:

1. Performs reconstructive surgery on the trunk, breast, and abdomen with increasing independence and surgical responsibility.
2. Participates in treatment of patients with malignancy of the trunk, thorax and abdominal wall.

3. Participates in the surgical management of thoracic and abdominal wall reconstruction with graduated independence, including:
 - a. reconstruction following sternal dehiscence and/or infection
 - b. reconstruction after tumor resection utilizing flaps and grafts
 - c. reconstruction of radiation injury of the thorax and trunk
 - d. abdominal wall fascial reconstruction
 - e. abdominal wound dehiscences and hernias utilizing prosthetic material, grafts, separation of parts
4. Participates in surgical and nonsurgical management of pressure sores including:
 - a. etiology and staging
 - b. prevention
 - c. nonsurgical considerations and management, including patient compliance
 - d. pressure sore surgery utilizing local flaps, muscle and myocutaneous flaps, and distant flaps
 - e. complications of surgery
 - f. rehabilitation
5. Participates in the surgical care of common developmental breast anomalies, with graduated surgical independence, including amastia, Poland's syndrome, asymmetry, ectopic mammary tissue, virginal hypertrophy, and gynecomastia.
6. Participates in the full spectrum of reconstructive surgery after breast carcinoma, including procedures on the opposite breast; participates in long-term treatment and follow-up of these patients.
7. Evaluates and treats patients with premalignant diseases of the breast, including prophylactic mastectomy in selected patients.
8. Evaluates and surgically treats patients with gynecomastia.
9. Participates in breast reconstruction following mastectomy, including:
 - a. tissue expanders
 - b. implants
 - c. flaps
 - d. nipple reconstruction
 - e. other procedures including tattooing
 - f. management of contralateral breast.
10. Participates in the evaluation and treatment of patients with post-surgical breast deformities.
11. Participates in the evaluation of patients with developmental breast abnormalities and performs diagnostic studies; interacts with appropriate consultants in allied areas.
12. Performs perioperative care and surgery on patients with developmental and acquired breast abnormalities, including breast hypertrophy, asymmetry, tubular deformity, and Poland's syndrome.
13. Critically analyzes patients with developmental chest wall deformities for aesthetic and functional reconstruction.
14. Participates in reconstructive surgery on patients with developmental chest deformities.

15. Participates in the surgical care of posterior trunk lesions, including meningocele, sacrococcygeal teratomas, etc.
16. Evaluates and participates in the multispecialty surgical evaluation of patients with congenital deformities of the posterior trunk.
17. Participates in the reconstruction of posterior trunk congenital defects.
18. Participates in the surgical care of congenital abdominal wall deformities such as gastroschisis, prune belly, and omphalocele.
19. Participates in the evaluation and surgical planning (in concert with other surgical specialists) of congenital abdominal wall deformities.

C. PRACTICE BASED LEARNING AND IMPROVEMENT

Goal: The resident will investigate and evaluate his or her own patient care practices, appraise and assimilate scientific evidence, and improve patient care practices.

Objectives

1. Uses information technology to prepare for cases, bringing to the OR the knowledge of current modalities of care and the scientific evidence for that care.
2. Routinely analyzes the effectiveness of own practices in caring for surgery patients.
3. Improves own practices in the care of patients by integrating appropriately gathered data and feedback.
4. Educates medical students and other healthcare professionals in the practices of breast, microsurgery, and general reconstructive surgery.
5. Functions independently with graduated advancement and appropriate faculty supervision.
6. Uses library sources to perform research and literature searches.
7. Understands the principles of clinical research and the application of biostatistics.

D. INTERPERSONAL AND COMMUNICATION SKILLS

Goal: The resident will demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their families, and professional associates.

Objectives

1. Educates patients and families in breast, microsurgery, and general reconstructive surgery care.
2. Demonstrates compassion for patients and families.
3. Provides adequate counseling and informed consent to patients.

4. Listens to patients and their families.
5. Assimilates data and information provided by other members of the health care team.
6. Charts and records accurate information.

E. SYSTEM BASED PRACTICE

Goal: The resident will demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value.

Objectives

1. Coordinates all aspects of the breast, microsurgery, and general reconstructive surgery care for patients.
2. Demonstrates knowledge of cost-effective breast, microsurgery, and general reconstructive surgery care.
3. Advocates for patients within the health care system.
4. Refers patients to the appropriate practitioners and agencies.
5. Facilitates the timely discharge of same day surgery patients.
6. Works with primary care physicians, and other consultants such as cardiologists, toward the safe administration of anesthesia.

F. PROFESSIONALISM

Goal: The resident will demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.

Objectives

1. Develops a sensitivity of the unique stresses placed on families under care for surgical diagnoses.
2. Exhibits an unselfish regard for the welfare of surgical patients.
3. Demonstrates firm adherence to a code of moral and ethical values.
4. Is respectful to patients and their families, especially in times of stress to the family unit.
5. Respects and appropriately integrates other members of the health care team.
6. Provides appropriately prompt consultations when requested.
7. Demonstrates sensitivity to the individual patient's profession, life goals, and cultural background as they apply to health care.

8. Is reliable, punctual, and accountable for own actions in the OR and clinic.
9. Understands the concepts of autonomy, beneficence, nonmaleficence, justice, and respect for life.
10. Maintains patient confidentiality.

The PEACOCK Service
UNC Hand/Burn Service

UNC Hand/Burn Service exposes the plastic surgery residents to the evaluation and management of patients who require complex burn, hand, and extremity reconstruction. This rotation provides the knowledge and tools required to evaluate and treat both traumatic hand and upper extremity problems as well as complex functional extremity reconstruction. Graduated responsibility is provided including outpatient evaluation and follow-up care, participation in microsurgical hand and extremity reconstruction, and includes the use of multiple laser surgery techniques for burn reconstruction. Faculty members include Dr. Hultman.

PGY4

A. MEDICAL KNOWLEDGE

Burn Reconstruction

Goal: The resident will achieve **sufficient** knowledge of the evaluation and management of chronic burn, hand, and extremity patients.

Objectives:

1. Lists the details regarding the use of skin substitutes, biological dressings, and xenografts in the treatment of the burn patient.
2. Discusses the reconstructive options for burn scar contractures.
3. Discusses options and indications for various laser therapies, types, and settings for the management of chronic burn scar.
4. Recites the use of pressure garments and silicone therapy in the prevention of abnormal scars.
5. Discusses the epidemiology, prevention, and socioeconomic and psychological impact of burns.

Anatomy/Physiology/Embryology of the Hand and Extremities

Goal: The resident will achieve **sufficient** knowledge of the anatomy, physiology, and embryology of the upper and lower extremity and will utilize this knowledge in the complete management of the hand, arm, and brachial plexus as well as complex lower extremity reconstruction after tumor extirpation.

Objectives:

1. Describes in detail the anatomy and physiology of the muscles, tendons, ligaments, and bones of the hand, upper and lower extremity.
2. Identifies in detail the anatomy of the vascular tree of the upper and lower extremity, including relationships to the surrounding structures.
3. Identifies in detail the anatomy of the major nerves and their branchings in the upper and lower extremity, including relationships to surrounding structures.
4. Draws the anatomy of the brachial plexus.
5. Demonstrate the detailed radiographic anatomy of the bony structures of the upper and lower extremity.
6. Utilizes the radiologic techniques, including plain films, CT scan, angiography and MRI of the upper and lower extremities.
7. Discriminates the principles of electrical evaluation and recites knowledge of the techniques of electrical examination of the upper and lower extremities including conduction studies and EMG evaluation.
8. Recites the principles of upper and lower extremity biomechanics.

Congenital Disorders

Goal: The resident will achieve **sufficient** knowledge of the spectrum of congenital abnormalities of the upper and lower extremity and perform comprehensive diagnostic evaluation and surgical management of such problems.

Objectives:

1. Recites the classification system for congenital hand anomalies including:
 - a. failure of part formation
 - b. failure of differentiation
 - c. duplication
 - d. overgrowth
 - e. undergrowth
 - f. congenital bands
 - g. generalized musculoskeletal anomalies
2. Describes the embryologic development and the physiologic theories that explain the etiology of hand anomalies.

3. Recites the operations, including timing and techniques used in the surgical management of hand anomalies.

Benign and Malignant Tumors

Goal: The resident will **sufficiently** understand the principles of diagnosis and treatment of extremity tumors and undertake comprehensive management of a wide variety of such lesions.

Objectives:

1. Describes the principles and techniques of management of upper and lower extremity tumors.
2. Describes the etiologic factors, epidemiology, and modalities of treatment for tumors of the upper and lower extremities.
3. Describes the clinical manifestations of both soft and hard tissue tumors of the extremities.
4. Describes the reconstructive principles and techniques for restoration of form and function after surgical resections.
5. Recites the indications and use of adjunctive therapy (i.e. radiation therapy and chemotherapy) in the management of and the prognosis for extremity tumors.
6. Describes the principles and techniques of management for extremity tumors, including reconstruction after surgical extirpation, for:
 - a. vascular tumors
 - b. nerve tumors
 - c. benign deep soft tissue tumors
 - d. malignant deep soft tissue tumors
 - e. primary bone tumors
7. Rationalizes the utilization of radiotherapy, medical oncology, hand therapy, occupational therapy, and prosthetics where appropriate for patients with extremity tumors.

Trauma

Goal: The resident will **sufficiently** understand the principles of diagnosis and treatment of extremity trauma, and perform comprehensive management of acute injuries and other trauma-related problems of the hand and arm.

Objectives:

1. Recites the principles and applications of diagnostic techniques for the evaluation of hand and upper extremity trauma.
2. Describes the techniques for operative management of traumatic injuries of the upper extremity, their indications and contraindications, and their possible complications and the treatment thereof.
3. Explains the indications for, contraindications to, and techniques in nonoperative management of traumatic injuries of the hand and upper extremity.
4. Describes the options for soft tissue coverage of upper extremities including:

- a. skin grafts
- b. local flaps
- c. free tissue transfer

Functional Problems of the Upper Extremities

Goal: The resident will achieve **sufficient** familiarity with aesthetic and functional problems of the hand and arm, understand the principles of rehabilitation of the upper extremity and the management, including comprehensive rehabilitation of the upper extremity.

Objectives:

1. Lists the surgical and nonsurgical treatment of nerve compression and entrapment syndromes of the upper extremity.
2. Draws the pathologic anatomy and physiology of upper extremity contractures and Dupuytren's disease.
3. Recites the basic pathophysiology of rheumatoid and nonspecific arthritis of the upper extremity.
4. Describes with the pharmacological therapy of rheumatoid arthritis.
5. Demonstrates the surgical treatment of rheumatoid arthritis, timing of therapeutic treatment and interactions with medical therapy.
6. Describes the common circulatory disorders of the upper extremity including, but not limited to: arterial thromboses, aneurysms, embolic disorders, arteriovenous fistulae, vasospastic disease and scleroderma.
7. Describes the diagnosis and treatment of common pain syndromes including sympathetic dystrophy.
8. Recites the management of upper extremity lymphedema.

Reconstruction

Goal: The resident will **sufficiently** understand the principles and techniques of upper extremity reconstruction and apply these to a variety of developmental, traumatic and acquired problems.

Objectives:

1. Recites the diagnostic techniques for evaluation of function, including EMG and conduction studies, arteriography, CT scan, and MRI evaluation.
2. Recites the use of tendon transfers.

B. PATIENT CARE

Goal: The resident will provide patient care that is compassionate, appropriate, and effective for the treatment of burn, hand, and extremity patients.

Objectives

1. Performs split and full thickness skin grafts.
2. Performs the surgical treatment of post-burn contractures with releases, z-plasties, grafting, and laser therapy.
3. Performs the clinical techniques for physical examination of the hand and upper extremity.
4. Performs the surgical techniques used to treat congenital and developmental hand anomalies.
5. Performs postoperative care of patients with congenital and developmental anomalies of the upper extremity.
6. Applies casts and splints for the preoperative and postoperative care of hand patients.
7. Utilizes the diagnostic techniques for upper extremity tumors.
8. Demonstrates the techniques of management of extremity tumors
9. Performs the procedures for the acute management and participates in the post-operative rehabilitation of traumatic injuries of the upper extremity including:
 - a. fractures and dislocations
 - b. nerve injury including brachial plexus
 - c. major amputation and avulsions
 - d. joint injury
 - e. tendon extensor and flexor injury of the hand
 - f. muscle and tendon injury of the arm
 - g. nail bed injuries
 - h. infections
 - i. fingertip and other minor injuries
10. Performs the surgical treatment options for contractures.
11. Performs treatment for tenosynovitis and tendon rupture.
12. Describes the indications for and perform the techniques of tendon reconstruction including tendon grafting – sources, methods, indications
13. Performs the management of nerve injuries including primary, delayed primary and secondary repair.
14. Performs the techniques for reconstruction of the amputated thumb including lengthening, pollicization, free toe to thumb, and free wrap-around techniques.
15. Performs the technical methods of soft tissue coverage including skin grafts, local flaps, distant flaps, and transfers.

C. PRACTICE BASED LEARNING AND IMPROVEMENT

Goal: The resident will investigate and evaluate his or her own patient care practices, appraise and assimilate scientific evidence, and improve patient care practices.

Objectives

1. Uses information technology to prepare for surgical cases, bringing to the OR the knowledge of current modalities of care and the scientific evidence for that care.
2. Routinely analyzes the effectiveness of own practices in caring for burn, hand and extremity patients.
3. Improves own practices in the care of burn patients by integrating appropriately gathered data and feedback.
4. Educates medical students and other healthcare professionals in the practices of burn, hand and extremity surgery and reconstruction.
5. Functions independently with graduated advancement and appropriate faculty supervision.
6. Uses library sources to perform research and perform literature searches.
7. Understands the principles of clinical research and the application of biostatistics.

D. INTERPERSONAL AND COMMUNICATION SKILLS

Goal: The resident will demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their families, and professional associates.

Objectives

1. Educates patients and families in post operative and rehabilitative strategies for burn, hand and extremity patients.
2. Demonstrates compassion for patients and families afflicted with trauma.
3. Provides adequate counseling and informed consent to patients.
4. Listens to patients and their families.
5. Assimilates data and information provided by other members of the health care team.
6. Charts and records accurate information.

E. SYSTEM BASED PRACTICE

Goal: The resident will demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value.

Objectives

1. Coordinates all aspects of the rehabilitation of the burn surgery patient.
2. Directs the rehabilitation of burn, hand, and extremity surgery patients by partnering with the following:
 - a. physical therapy
 - b. occupational therapy
 - c. PMR physicians
 - d. social workers
 - e. nutritionalists
3. Demonstrates knowledge of cost-effective burn, hand, and extremity surgery care.
4. Advocates for burn, hand and extremity surgery patients within the health care system.
5. Refers orthopedic patients to the appropriate practitioners and agencies.
6. Facilitates the timely discharge of burn, hand, and extremity surgery patients.
7. Works with paramedical professionals in the pre-hospital care of trauma patients.

F. PROFESSIONALISM

Goal: The resident will demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.

Objectives

1. Develops a sensitivity of the unique stresses placed on families under care for burn, hand, and extremity injuries.
2. Exhibits an unselfish regard for the welfare of burn, hand, and extremity surgery patients.
3. Demonstrates firm adherence to a code of moral and ethical values.
4. Is respectful to burn, hand, and extremity patients and their families especially in times of trauma and stress to the family unit.
5. Respects and appropriately integrates other members of the surgery team.
6. Provides appropriately prompt consultations when requested.
7. Demonstrates sensitivity to the individual patient's profession, life goals, and cultural background as they apply to burn, hand, and extremity care.
8. Is reliable, punctual, and accountable for own actions in the OR and clinic.
9. Understands the concepts of autonomy, beneficence, non-maleficence, justice, and respect for life.
10. Maintains patient confidentiality.

The FURLOW Service
UNC Craniofacial and Cosmetic Service

The Craniofacial and Cosmetic resident will learn the principles and tenets of evaluating, diagnosing and treatment management of patients with reconstructive and aesthetic issues of the face and cranium. Furthermore, the resident will gain critical knowledge in the diagnosis and treatment of aesthetic problems such as facial aging, rhinoplasty, breast aesthetics and techniques in structural fat grafting and dermal fillers. Upon completion of the month, she/he will be proficient in understanding the cutting edge techniques in aesthetic surgery. Graduated responsibility for the management and surgical care of patients requiring craniofacial reconstruction and aesthetic surgery will be provided. This will include outpatient evaluation and follow-up care, participation in calvarial and cleft reconstruction and evaluation and treatment of a multitude of aesthetic complaints. Faculty members include Drs. Damitz and Wood.

PGY4

A. MEDICAL KNOWLEDGE

Goal: The resident will achieve **sufficient** knowledge of the techniques and practice of oral and craniomaxillofacial surgery, nasal reconstruction and aesthetic surgery.

Objectives:

1. Discusses the embryology of the head and neck.
2. Recites the tenets of growth of the craniofacial skeleton.
3. Draws the anatomy of the head and neck with particular concern to the jaws and craniofacial skeleton.
4. Discusses the principles of odontogenesis
5. Recites the principles of and infiltration techniques of local anesthesia used in the head and neck.
6. Lists the principles of bone fixation and bony healing.
7. Discusses the general evaluation of the facial trauma patient.
8. Recites the techniques of the treatment of facial fractures, including:
 - a. frontal sinus fractures
 - b. orbital fractures

- c. nasal fractures
- d. NOE fractures
- e. midface and maxillary fractures
- f. mandibular fractures
- g. management of teeth in fractures

9. Discusses the unique treatment of pediatric facial fractures.

10. Describes the cephalometric analysis of maxillofacial surgery patients.

11. Discusses the common diagnoses in maxillofacial surgery and their management, including:

- a. retrogenia
- b. mandibular excess and deficiency
- c. vertical maxillary excess
- d. maxillary deficiency

12. Discusses the different kinds of occlusion, including:

- a. overjet
- b. overbite
- c. angle classification
- d. crossbites

13. Discusses the use of distraction osteogenesis in maxillofacial surgery.

14. Discusses maxillofacial surgery in the cleft patient.

15. Describes the acquired diseases of the TMJ and their management.

16. Describes the use of dento-facial prosthetics.

II: Implants/Biomaterials

Goal: The resident will demonstrate **sufficient** knowledge of both biology and physiology of various implant materials, including bone, cartilage, and alloplasts.

Objectives:

1. Identifies local wound factors that influence bone graft survival.
2. Discusses the biologic differences between vascularized and non-vascularized bone grafts.
3. Recites the influence of perichondrial and scoring on the warping of cartilage grafts.
4. Discusses the various types of breast implants and the factors involved in implant choice, including surface content characteristics; is aware of the issues regarding silicone and is able to discuss these with a patient.
5. Discerns the effects of breast implant surface characteristics on formation of capsular contracture.
6. Discusses the various injectable materials for subcutaneous filling and the principles of their use.

7. Discusses the processes of bone repair: incorporation, osteoconduction and osteoinduction.
8. Discusses the difference in incorporation between cortical and cancellous bone grafts and membranous and endochondral autografts.
9. Explains the immunology of bone and cartilage transplantation.
10. Lists the chemistry and biocompatibility of the commonly implanted biomaterials, including silicone, methyl methacrylate, hydroxyapatite, tricalcium phosphate and proplast.
11. Describe the factors involved in the choice of implant materials for varying reconstructive problems.
12. Discusses the chemistry and biocompatibility of commonly injected materials including: collagen (bovine and human), fat, and others.

III. Aesthetic Surgery of the Breast and Trunk

Goal: The resident will be **sufficiently** familiar with aesthetic surgery of the trunk and breast, and undertake comprehensive surgical management of such diagnoses.

Objectives:

1. Draws the normal anatomy of the breast and axillae.
2. Describes the pathologic anatomy and histology of the breast as it relates to mammary hyperplasia and hypoplasia.
3. Discusses the various surgical techniques for breast reduction, the indications for and contraindications to the procedures.
4. Discusses the complications of breast reduction, their prevention and management.
5. Describes the various surgical techniques for breast augmentation, the indications for and contraindications to the procedures.
6. Discusses the complications of augmentation mammoplasty, their prevention and management.
7. Discusses the different types of breast implants and the reasons for choosing a particular type for a particular problem.
8. Describes the basic techniques for mastopexy, the indications for and contraindications to these procedures.
9. Discusses the complications of mastopexy, their prevention and management.
10. Discusses techniques for treatment of aesthetic trunk deformity such as panniculectomy and abdominoplasty, the indications for them and contraindications to the procedures.
11. Discusses the complications of panniculectomies and abdominoplasties and their prevention and management.
12. Discusses the treatment options for congenital breast anomalies such as Poland's syndrome.

13. Describes the techniques of suction lipectomy as applied to aesthetic deformities of the trunk, as well as anesthetic management for these procedures.
14. Recites the principles of selection of mastopexy vs. augmentation mammoplasty.
15. Recites the principles of selection of abdominoplasty vs. liposuction.
16. Explains the basic principles and techniques for treating other aesthetic deformities of the breast and trunk such as inverted nipples, localized lipodystrophy, tubular breast deformity, etc.
17. Lists the long-term consequences of augmentation mammoplasty such as capsular contraction and its treatment as well as methods for follow-up including special techniques for mammography.
18. Discusses the post-obesity deformity and the options for body contouring surgery.

IV. Aesthetic Surgery of the Head and Neck

Goal: The resident will be **sufficiently** familiar with aesthetic diagnoses of the head and neck and understand the principles of surgical treatment of such problems.

Objectives:

1. Discusses the concepts of beauty and aesthetic principles of the facial structures.
2. Identifies the principles and techniques of aesthetic rhinoplasty as well as the differences in approach between primary and secondary rhinoplasty.
3. Recites the diagnostic and therapeutic techniques in the management of nasal airway obstruction.
4. Discusses the application of aesthetic principles to the cleft patient.
5. Explains the complications of rhinoplasty and septoplasty, their prevention and treatment.
6. Discusses the varying effects of aging and sun exposure on the facial structures.
7. Demonstrates the techniques of rhytidectomy, suction lipectomy, genioplasty, blepharoplasty, and other methods for treatment of the aging face.
8. Discusses the complications of facial aesthetic surgery, their prevention and treatment.
9. Draws the various aesthetic deformities of the ear and know the techniques of their correction.
10. Discusses the aesthetic and functional problems of the eyelid, including blepharochalasis and ptosis; knows the treatment for these diagnoses, complications and prevention.
11. Discusses the diagnostic methods and treatment options for the patient with facial palsy.
12. Describes the diagnostic principles and treatment techniques for alopecia pattern baldness including tissue expansion, scalp flaps, and hair transplantation.
13. Discusses the principles and techniques of orthognathic surgery for the treatment of craniofacial skeletal dysharmony.

14. Discusses the various ancillary techniques for management of the aging face, including chemical peel, Retin A, dermabrasion, collagen injection, laser resurfacing, injection of filling material, botulinum toxin, hydroxyapatite, hyaluronic acid, and skin care products.
15. Discusses the use of lasers for the treatment of unwanted hair, tattoo removal, and facial resurfacing, include laser biophysics and safety.
16. Discusses the various techniques used for face lifting, including the role of platysma, SMAS, subperiosteal, deep plan, composite, etc.
17. Discusses the different types and appropriate uses of liposuction.

B. PATIENT CARE

Goal: The resident will provide patient care that is compassionate, appropriate, and effective for the treatment of surgical problems.

Objectives

1. Performs the various local anesthetic facial blocks for procedures done in oral and maxillofacial surgery.
2. Performs with graduated surgical independence bony fixation of the craniofacial skeleton.
3. Performs the head and neck exam in the facial trauma patient.
4. Performs the facial evaluation for orthognathic surgery patients.
5. Participates in the cephalometric analysis, prediction tracing, and preoperative surgical planning of maxillofacial surgery patients.
6. Participates in preoperative model surgery.
7. Participates in common maxillofacial surgical procedures, including:
 - a. facial fractures
 - b. genioplasties
 - c. sagittal split mandibular osteotomies
 - d. maxillary LeFort I osteotomies
 - e. bimaxillary osteotomies
8. Participates in the creation and application of dental splints in maxillofacial surgery.
9. Performs complete assessment of patients presenting for facial plastic surgery.
10. Performs the following breast surgeries with graduated operative independence including:
 - a. reduction mammoplasty
 - b. augmentation mammoplasty
 - c. ptosis correction and mastopexy.
11. Performs the following surgeries including pre-operative markings with graduated operative independence, including:

- a. suction lipectomy
 - b. panniculectomy
 - c. abdominoplasty
 - d. body lifts
 - e. brachioplasties
 - f. thigh lifts
- 12. Performs preoperative markings for reduction mammoplasty.
- 13. Performs a comprehensive (internal/external) nasal exam and participate in surgery of the nose including:
 - a. primary and secondary rhinoplasty
 - b. cleft lip nasal deformity
 - c. airway obstruction
 - d. septoplasty.
- 14. Participates in facial aesthetic surgery including:
 - a. rhytidectomy
 - b. brow lift
 - c. facial liposuction
 - d. Blepharoplasty
 - e. genioplasty
 - f. jaw disharmony
- 15. Performs both open and endoscopic surgical therapy for patients with aging face including rhytidectomy and brow lift.
- 16. Performs ancillary procedures for the aging face such as chemical peels, skin care, injection of fillers and botox, etc.
- 17. Participates in the treatment of patients with facial nerve palsy including:
 - a. nerve grafts
 - b. placement of gold weights
 - c. suspensory static procedures
 - d. dynamic procedures
 - e. free tissue transfer.
- 18. Evaluates the psychosocial status of the patient presenting for aesthetic plastic surgery and determine whether the patient is an appropriate candidate for surgery.

C. PRACTICE BASED LEARNING AND IMPROVEMENT

Goal: The resident will investigate and evaluate his or her own patient care practices, appraise and assimilate scientific evidence, and improve patient care practices.

Objectives:

1. Uses information technology to prepare for surgical cases, bringing to the OR the knowledge of current modalities of care and the scientific evidence for that care.

2. Routinely analyzes the effectiveness of own practices in caring for patient with craniofacial and cosmetic plastic surgical diagnoses.
3. Improves own practices in the care of patient by integrating appropriately gathered data and feedback.
4. Educates medical students and other healthcare professionals in the practice of cosmetic and reconstructive surgery.
5. Functions independently with graduated advancement and appropriate faculty supervision.
6. Participates in and appreciates the value of outcome studies as they apply to craniofacial and aesthetic surgery.
7. Continues to keep apprised of new techniques used in aesthetic surgery.

D. INTERPERSONAL AND COMMUNICATION SKILLS

Goal: The resident will demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their families, and professional associates.

Objectives:

1. Educates patients and families in operative and post-operative strategies for aesthetic and reconstructive surgery.
2. Demonstrates compassion for patients and their families affected by craniofacial and aesthetic concerns.
3. Provides adequate counseling and informed consent to patients.
4. Listens to patients and their families.
5. Assimilates data and information provided by referring surgeons and other members of the care team.
6. Charts and records accurate information.
7. Demonstrates appreciation of the psychosocial aspects of craniofacial surgery, facial and truncal deformity.
8. Accurately assess patient's expectations of aesthetic plastic surgery and honestly educates them on appropriate surgical intervention.

E. SYSTEM BASED PRACTICE

Goal: The resident will demonstrate an awareness of and responsiveness to the larger context and system of health care and ability to effectively call on system resources to provide care that is of optimal value.

Objectives:

1. Directs the rehabilitation of craniofacial patients following surgery by partnering with the following:

- a. physical therapy
- b. occupational therapy
- c. genetics
- d. audiology
- e. speech pathology

2. Demonstrates knowledge of cost-effective craniofacial reconstruction and aesthetic surgery.
3. Advocates for craniofacial and aesthetic patients within the health care system.
4. Refers craniofacial patients to the appropriate practitioners and agencies.
5. Facilitates the timely discharge of patients undergoing reconstructive or aesthetic plastic surgery.
6. Participates in all aspects of craniofacial and cleft care, partnering with pediatric surgeons, neurosurgeons, otolaryngologists, and other care team members in the complete care of the craniofacial or cleft patient.
7. Understands the state, local and specialty requirements for outpatient surgical centers utilized in the care of aesthetic surgery patients.

F. PROFESSIONALISM

Goal: The resident will demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.

Objectives:

1. Develops a sensitivity of the unique stress placed on families under care for aesthetic or reconstructive reasons.
2. Exhibits an unselfish regard for the welfare of reconstructive patients.
3. Demonstrates firm adherence to a code of moral and ethical values.
4. Is respectful to reconstructive and aesthetic patients and their families, especially in times of stress to the family unit.
5. Respects and appropriately integrates other members of the care team.
6. Provides appropriately prompt plastic surgery consultations when requested.
7. Provides non-biased consultations for patients presenting for aesthetic surgery.
8. Demonstrates sensitivity to the individual patient's profession, life goals, and cultural background as they apply to reconstructive and aesthetic plastic surgery.
9. Is reliable, punctual and accountable for own actions in the OR and outpatient clinic.
10. Appreciates the potential conflict of interest that exists in the practice of aesthetic plastic surgery with respect to patient's surgical needs and expectations and the surgeon's financial rewards.