

## **DERMATOLOGY ROTATION**

## **A. Medical Knowledge**

### **I. Anatomy/Physiology/Embryology**

**Goal:** The resident will have knowledge of the development, function, and histology of skin.

#### **Objectives:**

1. Know about the embryology of skin and when the different layers appear during gestation.
2. Discuss the epidermis, dermis, and skin appendages. Know their structure and function
3. Discuss the components of the dermis: fibroblasts, collagen, elastin, ground substance
4. Know what the subcutaneous tissue and fascia layers are and how they function.
5. Discuss the structure and function of the skin appendages including the following:
  - a. Eccrine sweat glands
  - b. Apocrine sweat glands
  - c. Sebaceous glands
  - d. Neural end organs
  - e. Hairs
6. Discuss how the skin reacts to the following:
  - a. Smoking
  - b. UV light trauma
  - c. Microbial trauma
  - d. Mechanical trauma
  - e. Heat
  - f. Cold
  - g. Pharmacological agents
7. Know the anatomy of the nail and its surrounding structures and understand the function of each.
8. Understand the nature and mechanism of action of the basic pharmacologic agents used to treat skin diseases.

## II. Infectious Skin Problems

- a. Fungal
  - i. Warts
  - ii. Onychomycosis
  - iii. Molluscum contagiosum
- b. Viral
  - i. Herpes zoster
  - ii. Herpes simplex
- c. Bacterial
  - i. Cellulitis

**Goals:** The resident should demonstrate knowledge of the described skin lesions in each category. There should be a basic ability to recognize the morphologic and histologic features of the more common problems.

### Objectives:

1. Understand the clinical presentation and the spectrum of severity of the disease.
2. Have a basic understanding of how to diagnose these skin problems.
3. Know the natural history of the untreated form of the disease.
4. Know the options for treatment of the various problems including creams, soaps, topical antibiotics, oral antibiotics, steroids, excisional therapy, laser, sun screens, and dermabrasion.
5. Know which conditions can be cured as opposed to just treated.
6. Be able to recite and explain the grading/staging system for malignant lesions.
7. Be able to recommend maintenance therapy and screening for the patient.

### III. Inflammatory Skin Problems

- a. **Contact Dermatitis**
  - i. **Poison Ivy**
  - ii. **Poison Oak**
- b. **Acne**
- c. **Hidradenitis**
- d. **Rosacea/Rhinophyma**

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#### IV. Neoplastic Skin Problems

- a. Actinic keratosis
- b. Squamous Cell Cancer
- c. Basal Cell Cancer
- d. Merkel Cell Cancer
- e. Melanoma
- f. Dermatofibrosarcoma protuberans
- g. Spindle Cell Cancer
- h. Angiosarcoma

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## V Congenital

- a. Congenital Melanocytic Nevi
- b. Giant Hairy Nevus
- c. Nevus Sebaceous of Jadassohn
- d. Xeroderma Pigmentosum
- e. Spitz Nevi
- f. Pilomatrixoma
- g. Pyogenic granuloma
- h. Neurofibromas
- i. Skin tags
- j. Vascular malformations
  - i. Telangiectasias
  - ii. Venous malformations
  - iii. Lymphatic malformations
  - iv. Capillary malformations
  - v. Arteriovenous malformations
  - vi. Capillary-lymphatic-venous malformation (Klippel-Trenaunay syndrome)
  - vii. Maffucci syndrome
  - viii. Parkes Weber syndrome
- k. Vascular Tumors
  - i. Hemangiomas
  - ii. Kaposiform hemangioendothelioma
  - iii. Pyogenic granuloma

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### Objectives:

1. Understand the clinical presentation and the spectrum of severity of the disease.
2. Have a basic understanding of how to diagnose these skin problems.
3. Know the natural history of the untreated form of the disease.
4. Know the options for treatment of the various problems including creams, soaps, topical antibiotics, oral antibiotics, steroids, excisional therapy, laser, sun screens, and dermabrasion.
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## VI Other

### a Disorders of Pigmentation

- i. Vitiligo
- ii. Melasma
- iii. Hyper/Hypopigmentation

### b Alopecia

**Goals:** The resident should demonstrate knowledge of the described skin lesions in each category. There should be a basic ability to recognize the morphologic and histologic features of the more common problems.

### Objectives:

7. Understand the clinical presentation and the spectrum of severity of the disease.
8. Have a basic understanding of how to diagnose these skin problems.
9. Know the natural history of the untreated form of the disease.
10. Know the options for treatment of the various problems including creams, soaps, topical antibiotics, oral antibiotics, steroids, excisional therapy, laser, sun screens, and dermabrasion.
11. Know which conditions can be cured as opposed to just treated.
12. Be able to recite and explain the grading/staging system for malignant lesions.
7. Be able to recommend maintenance therapy and screening for the patient.

## **B. Patient Care**

**Goal:** Resident should be able to provide comprehensive, compassionate, and effective care for the skin.

### **Objectives:**

1. Evaluate simple and complex cutaneous lesions and know the appropriate steps to diagnose and treat these lesions (based on size, location, and overall condition of patient).
2. Be able to list and describe the following types of biopsies and see them performed:
  - a. Punch biopsy
  - b. Needle biopsy
  - c. Excisional biopsy
  - d. Incisional biopsy
3. Participate in diagnostic and reconstructive plans for various skin lesions on the face and elsewhere on the body
4. Be able to plan when Moh's excision is necessary and be able to formulate a reconstructive plan post Moh's excision.
5. Participate in laser treatment for skin conditions including:
  - a. Vascular lesions
  - b. Pigmented lesions
  - c. Unwanted hair
  - d. Skin resurfacing
6. Know the options for pharmacologic treatment of aging skin

### **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. Use information technology to prepare for surgical cases and bring that knowledge to the O.R.
2. Analyze the effectiveness of own practices in caring for patients with diagnoses involving the skin.
3. Improve own practices in the care of patients by integrating appropriately gathered data and feedback.
4. Educate medical students and other healthcare professionals in the practice of skin care and prevention of skin cancer.
5. Function independently with graduated advancement and appropriate faculty supervision.

#### **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. Educate patients and their families about skin cancer and its prevention.
2. Provide adequate counseling and informed consent to patients.
3. Listen to patients and their families.
4. Chart and record accurate information
5. The resident should have a working understanding of diagnosis and treatment of basic diseases of the skin such that he or she can explain the nature of the problem to the patient and address the treatment options and long term outcome.

### **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. Coordinate care of patients with lesions that are concerning for skin cancer. The resident should be able to biopsy appropriately using either incisional or excisional techniques or refer to the dermatologist for Moh's excision if appropriate.
2. Coordinate a plan of care in conjunction with a dermatologist.
3. Evaluate the patient's psychosocial situation in conjunction with family or a PCP such the appropriate reconstructive option is chosen after extirpation of a skin cancer.
4. Best evaluate whether a treatment plan should be office based, outpatient surgery, or inpatient surgery.