Welcome to UNC Pediatric Dermatology

The primary objectives of your experience include:

1. learn effective management of pediatric atopic dermatitis
2. learn effective management of acne vulgaris
3. learn the appropriate classification and management of pediatric vascular lesions
4. learn the appropriate classification and management of pediatric melanocytic nevi
5. learn the appropriate management of cutaneous infections including impetiginization, molluscum contagiosum, verrucae, herpes simplex, etc
6. appreciate the role of a dermatologist in your care of patients

You will be a member of our team which can include dermatology, pediatric, and family medicine residents. As a team, our goal is to provide timely, courteous, safe, and appropriate care to the patients. While we work, we all aim to learn from each other (residents are always teaching faculty) and have fun.

You will be expected to see patients after the nurses have appropriately checked the patient into a room. We use a color dot system on the EPIC clinic schedule to sign up for patients. Please see the other link related to EPIC guide within our pediatric dermatology clinics.

Once you are signed up for a patient and the room number is present beside that patient, grab that chart, see the patient, and return to the resident’s room to present the patient to the attending. Remember that there may be a queue for presenting to the attending so ask your fellow residents working the same clinic if they are waiting to present.

As some of our patients are new to an academic setting, please introduce yourself and begin similar to: “Hello, I am Dr. Smith. I am working with Dr. Faculty name. I will start collecting information and exam you/child’s name, then bring in Dr. Faculty.”

Obtain a problem focused history and find out the evolution and potential treatments previously utilized. Perform an examination to the degree that you feel comfortable. Return to the “write-up” area and wait to present to Faculty. In your presentation, focus on primary lesions and generate a differential list. Don’t fear being incorrect; in medicine we always will miss diagnoses during and after our training.

After the resident/attending team has decided on management and follow-up, you’ll exit the room and enter prescriptions and diagnoses into EPIC. Please see the EPIC guide.

If the patient is going to follow up in 2 months or less time, they need to go to check-out to schedule that appointment. Enter the follow up time on the Plan in EPIC. If their follow up is more than two months, they do not need to go to check-out and are ‘Good to Go.’ Our clinic will send them a reminder to call as their due date approaches.

Once you have finished a patient, look at the EPIC schedule for the next ‘Provider Ready’ patient.

If at any time you receive calls from patients or pharmacists regarding patients that you have seen in the dermatology clinic, please forward those calls to the clinic phone line at 919-966-2485. Simply tell the patient or pharmacist that you are no longer in that clinic and Dr. Faculty needs to be aware of the question/concern/refill request.
We appreciate your involvement in our clinic and hope that it will be an informative experience. Your Residency Coordinator will have a couple articles regarding common conditions for your reading. Please utilize our textbooks and dermatology residents as sources of information and/or guidance. Included in this introduction is our therapeutic approach to atopic dermatitis and acne, frequently asked questions, and a brief medication guide.

Contact information:

Dermatology Residency Coordinator (Cherie Ezuka) 843-5539
   Cherie_ezuka@med.unc.edu
Dermatology Clinic front Desk 966-2485
Dermatology Write-up room (for physicians only) 966-2483
Dean Morrell’s pager 969-0441
   morrell@med.unc.edu
Clinic Appointments 966-2485
Dermatology consults (In-patient) 216-6360

Commonly asked questions

History/Physical/Management

What general advice do you have about the patient interview?
• For a new patient, after you introduce yourself, it’s a good idea to let them know that you’re working with the attending. Otherwise, they’re often confused and think they’re seeing you instead of the attending.
• Ask everyone about amount of sun exposure (outdoor work/hobbies, tanning beds, or sunbathing), sunscreen use, and use of wide-brimmed hats. This is the preventive medicine obligation for our field.
• For patients with a history of skin cancer, ask about new, changing, or concerning lesions. If there are concerns, ask about noted changes, itching, burning, bleeding or crusting.
• PMH and medications are especially important to review if you think their complaint could be a manifestation of systemic disease or due to drug reaction.
• Always confirm the patient’s drug allergies.
• Social history: Find out how far away patients live because this influences management/follow-up.
• Family history: Ask about history of melanoma and non-melanomatous skin cancer; for suspected atopic dermatitis, ask about FH of atopy, asthma, and hayfever. Family history can also be important for suspected autoimmune dermatoses and obviously, genodermatoses.
• ROS: Especially important for patients with history of melanoma and patients being treated with systemic medications.

What should I keep in mind during the physical exam?
• A full body exam will usually not include breasts and genitalia unless the patient has specific complaints about these areas (ask them). If you need to examine these areas in an older kid, ask for chaperone from the staff. You can use your own good judgment for these situations but when in doubt, it’s always safer to have a chaperone especially if parents are not present.
• If it’s scaly, consider scraping it for KOH.
• Check hair, nails, and oral mucosa as appropriate.
• Check **lymph nodes** for patients with history of melanoma, evaluation of tinea capitis, or suspicion of infectious lesion.
• When checking for **pigmented lesions**, remember to look in scalp, on soles of feet, and between toes.
• When checking for non-melanomatous skin cancers around the head and neck, look carefully in all the “nooks and crannies” (behind ears, within the auricle, corners of eyes/nose/mouth).
• Wear gloves as appropriate (HIV+; exam of genitals, axillary/inguinal lymph nodes, mouth; potential fluid contact).

**Any tips for writing out prescriptions?**
• Always make sure you prescribe the appropriate quantity and make sure you ask the attending how much to give if you are unsure. We usually specify the number of grams of creams/gels/ointments that we want the pharmacy to dispense. Without this information the pharmacy will often dispense the smallest tube possible and it is insufficient for most of our patients.
• Specify the location (hands/face/arms) whenever possible in the instructions for topical medications.
• Give appropriate number of refills to at least cover the interval until their next visit.

**Follow-Up Responsibilities**

*The biops/laby results are back. What do I do?*
• The Attending will call the patient and give them the results.

*How do I handle prescription refill requests?*
Direct the patient or pharmacist to call the Derm Clinic at 966-2485.

**Dermatology Pharmacopoeia**

**Treatment of Molluscum Contagiosum**
• Body: Cantharidin for younger patients and Cantharidin or liquid nitrogen for older patients. Cantharidin needs to be washed off in 4 hours or whenever a blister forms (whichever comes first).
• Face and groin: Aldara cream three times per week.

**Treatment of Hemangiomas** (Rapidly growing/ulcerating/deforming)
• Oral propranolol 2-3mg/kg divided BID. We usually start at 2mg/kg and then see them back on one month to increase toward 3mg/kg if all is going well. Therapy is ideally started in the first three months of life and continued to 9-12 months age.

**Acne, Topical Antibiotics/Antiseptic**

BPO
• Typically no insurance coverage but many OTC formulations are available (wash, gel, creams, etc).

Sodium sulfacetamide (Klaron)
• 10% Lotion (59 ml)

Clindamycin/BPO (Benzaclin, Duac)
• 1% clinda/5% BPO gel (25 gm- Benzaclin, 45 gm Duac)

Clindamycin (Cleocin T)
• 1% soln (30, 60 ml)
lotion (60 ml)
gel (30, 60 gm)

Erythromycin (Akne-mycin)
  2% oint (25 gm)
  soln (60 ml)

Metronidazole (Metro –cream, -gel, -lotion)
  0.75% cream (45 gm)
  gel (30, 45 gm)
  lotion (60 ml)

Mupirocin (Bactroban)
  2% oint (1, 15, 30 gm)

Chlorhexidine (Hibiclens)
  4% cleanser (15, 120, 240, 480, 960, 3840 ml)

Retinoids (Topical): In order of increasing strength
(Avita) Tretinoin
  0.025% cream, gel (20, 45 gm)
(Differin) Adapalene
  0.1% cream, gel (15, 45 gm)
(Retin-A) Tretinoin
  0.025%, 0.05%, 0.1% cream (20, 45 gm)
  0.01%, 0.025% gel (15, 45 gm)
(Retin-A Microgel) Tretinoin
  0.04%, 0.1% gel (20, 45 gm)
(Tazorac) Tazarotene
  0.05%, 0.1% cream (15, 30, 60 gm)
  0.05%, 0.1% gel (30, 100 gm)

Anti-fungal (Topical)
Ciclopirox (Penlac for nails)
  8% soln (3.3 ml)
Clotrimazole (Lotrimin)
  1% cream (15, 30, 45 gm); OTC (12, 24 gm)
Econazole (Spectazole)
  1% cream (15, 30, 85 gm)
Ketoconazole (Nizoral)
  2% cream (15, 30, 60 gm)
  2% shampoo (120 ml)
Iodoquinol/HC (Vytone)
  1% cream (30 gm)
Mycostatin (Nystatin)
  Cream (30 gm)
  Powder (15 gm)
Terbinafine (Lamisil AT)
  1% cream OTC (12, 24 gm)

Anti-histamines, Anti-puritic (Oral)
Cetirizine (Zyrtec)
Tabs (5, 10 mg); adult 5-10 mg qd  
Syrup (5mg/5ml); kids 0.5-1 tsp po qd  

Doxepin (Zonalon)  
Caps (10, 25, 50, 75, 100, 150 mg); adult start 25mg qhs  
Concentrate (10mg/ml); kids take 1cc po qhs  

Fexofenadine (Allegra)  
Tabs (30, 60, 180 mg), Caps (60 mg); adult 60mg bid or 180mg qd  

Hydroxyzine (Atarax)  
Tabs (10, 25, 50 mg), Caps (25, 50, 100 mg); adult 10-100 mg qd-qid  
Syrup (10mg/5ml); kids 2mg/kg/d divided tid  

Loratadine (Claritin)  
Tabs (10 mg); adult 10mg qd  
Syrup (1mg/ml)  

Anti-perspirant/Drying  
Aluminum Cl hexahydrate (Drysol)  
20% soln (35, 37.5, 60 ml); apply qhs  
Talc/microporous cellulose (Zeasorb)  
Powder (70.9, 312 gm)  

Depigmenting Agents  
Hydroquinone 2%, OTC (Porcelana, Palmer’s, Ambi)  
Hydroquinone 4% with sunscreen (Solaquin Forte)  
Tri-Luma (fluocinolone acetonide 0.01%, hydroquinone 4%, tretinoin 0.05%)  

Emollients/Keratolytics/Moisturizers  
Lactic Acid (Lac-Hydrin)  
5% lotion OTC  
12% lotion (225, 400 ml)  
12% cream (280 gm)  

Urea (Carmol)  
10% lotion OTC  
20% cream OTC  
40% cream Rx  

Lactic acid/Urea (Eucerin Plus)  
2.5% Lac/10% U cream OTC  
5% Lac/5% U lotion OTC  

Hair Growth  
Finasteride (Propecia)  
Tab (1 mg); 1 mg qd  
Minoxidil (Rogaine)  
2%, 5% soln OTC (60 ml)  

Hair Removal  
Eflornithine HCl (Vaniqa)  
13.9% cream (30 gm)
Pigmenting Agents/Cosmetic Cover-up (Vitiligo, Alopecia)

Dihydroxyacetone
  Chromelin, (Summer Labs)
  Dy-O-Derm (Galderma)

Cover-up
  Dermablend cosmetics (Loreal)
  Toppik alopecia cover-up (Spencer-Forrest)

Protectants (Barrier)

Zinc oxide (Desitin)
  10% cream (420 gm)
  40% oint (30, 60, 90, 120, 240, 240, 480 gm)

Zinc oxide/Corn startch
  25% paste (30, 480 gm)

Shampoos

Coal Tar (T/Gel)
  1% shampoo OTC

Ketoconazole (Nizoral)
  1% shampoo OTC (Nizoral A-D)
  2% shampoo (120 ml)

Salicyclic acid (T/Sal)
  3% shampoo OTC

Selenium Sulfide
  1% shampoo OTC (Head & Shoulders Intensive Care, Selsun Blue)
  2.5% shampoo (120 ml)

Fluocinolone (Capex)

Clobetasol (Clobex)

Wart Treatment

Salicylic Acid
  16% soln OTC (Compound W)
  17% soln, gel OTC (Duofilm)
  40% plasters OTC (Mediplast, Compound W one-step)

Candidal injections
  0.1 cc per wart to max 1cc in patient per visit

Squaric acid
  Protocol in clinic

Wet/Crusted Lesions

Aluminum Acetate Solution (Burow’s)
  Domeboro powder (12, 100 pkts/box)
  Domeboro tablets (12, 100, 100 tablets/box)
  [1 pkt/tablet per pint of water = 1:40 solution]

Therapeutic Approach to Acne
1. **Pathogenesis**
   a. Microcomedo formation
   b. Androgen stimulation of sebaceous glands
   c. Normal cutaneous bacteria
   d. Immunogenic stimulators
   e. Inflammatory response
2. **Types of acne**
   a. Superficial (comedones)
      i. Topical retinoids qhs
      ii. My retinoid therapeutic ladder

<table>
<thead>
<tr>
<th>“Comedo buster”, potential for irritation</th>
<th>Tazorac gel 0.05%, 0.1%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tazorac cream 0.05%, 0.1%</td>
</tr>
<tr>
<td></td>
<td>Retin-A Microgel 0.1%</td>
</tr>
<tr>
<td></td>
<td>Retin-A Microgel 0.04%, Differin 0.3% gel</td>
</tr>
<tr>
<td><strong>My entry level for all patients</strong></td>
<td>Tretinoin 0.025% cream, Differin 0.1% cream</td>
</tr>
<tr>
<td></td>
<td>Differin 0.1% cream</td>
</tr>
<tr>
<td>Least irritating, least effective</td>
<td>Avita cream</td>
</tr>
</tbody>
</table>

Can add topical benzoyl peroxide qam if needed or topical dapsone (Aczone gel)
   Face only: gel
   Torso + face: wash
   OTC (Panoxyll), Triaz (3, 6, or 9%), or Brevoxyl (4, 8, 10%)

b. Deep and inflammatory (papules, pustules, cysts, nodules)
   i. Topical retinoids qhs
   ii. Topical Combo products qam to face
      1. Duac gel (Clinda/benzoyl peroxide)
      2. Benzaclin gel (Clinda/benzoyl peroxide)
      3. EpiDuo (retinoid/benzoyl peroxide)
   iii. Oral antibiotics (tetracycline family)

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<thead>
<tr>
<th>Agent</th>
<th>Dosing</th>
<th>Issues</th>
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<tbody>
<tr>
<td>Tetracycline</td>
<td>500 mg BID</td>
<td>Empty stomach</td>
</tr>
<tr>
<td>Doxycycline</td>
<td>20-100mg qd-BID</td>
<td>Sun sensitivity</td>
</tr>
<tr>
<td>Minocycline</td>
<td>50-100mg qd-BID</td>
<td>Lupus, autoimmune hepatitis, bluish discoloration (all if used &gt; 1 year)</td>
</tr>
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iv. Isotretinoin
   1. 1-2 mg/kg/day, 5-7 months
   2. Monitor pregnancy, LFTs, lipids

**Atopic Dermatitis**

1. Education
a. Control vs Cure
b. Daily bathing
c. Mild to no soap
d. Cotton clothing; fragrance-free products; no dryer sheets or fabric softener

2. Barrier
   a. White petrolatum after bathing
   b. Cetaphil cream next acceptable

3. Infection
   a. Staph aureus (cephalexin 125mg/5ml or 250mg/5ml, 30-50 mg/kg/d divided tid; clindamycin 75mg/5ml, 10-30 mg/kg/d divided tid)
   b. HSV (eczema herpeticum)

4. Inflammation
   a. Unwarranted fear of topical steroids
   b. Always use the weakest possible to establish control in one week
   c. Only use ointments
   d. Intermittent pulses to clear in 3-5 days
   e. Moisturize clear/controlled areas without steroids
   f. First sign of return of inflammation:
      i. Repeat topical steroid pulse
   g. If steroid doesn’t clear in 1-2 weeks, go to stronger agent (knees, elbows, hands, and feet commonly need a step up from rest of body)
   h. My therapeutic ladder (There are many more options; below are my workhorses. Generic forms are acceptable and effective.)

<table>
<thead>
<tr>
<th>Class 1</th>
<th>Clobetasol, Halobetasol</th>
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<tbody>
<tr>
<td>2</td>
<td>Fluocinonide</td>
</tr>
<tr>
<td>3</td>
<td>Triamcinolone 0.1%</td>
</tr>
<tr>
<td>4</td>
<td>Synalar 0.025%</td>
</tr>
<tr>
<td>5</td>
<td>Desonide</td>
</tr>
<tr>
<td>6</td>
<td>Hydrocortisone 2.5%</td>
</tr>
<tr>
<td>7</td>
<td>Hydrocortisone 0.5, 1%</td>
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</table>

*(These are guidelines based upon the type of patient referred to our Pediatric Dermatology clinic. If weaker steroids establish good control in 5-10 days, then go with that specific agent.)*

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<thead>
<tr>
<th>Location</th>
<th>Mild</th>
<th>Moderate/Severe</th>
</tr>
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<tbody>
<tr>
<td>Face</td>
<td>Westcort</td>
<td>Triamcinolone 0.1</td>
</tr>
<tr>
<td>Body</td>
<td>Triamcinolone 0.1</td>
<td>Clobetasol</td>
</tr>
</tbody>
</table>

5. Pruritus
   a. In infants and young children, good control of skin activity usually results in discontinued scratching
   b. Older kids and chronic scratchers may need oral antihistamines
      i. Zyrtec qam (if not sedating in patient)
      ii. Hydroxyzine (10mg/5ml, 2mg/kg/day divided TID) given qhs
      iii. For recalcitrant pruritus, doxepin (10mg/1ml, 1ml NOT tsp qhs)