BIOPSY OPTIMIZATION IN THE EVALUATION OF ALOPECIA

- A biopsy is indicated if
  - The diagnosis is in doubt
  - Multifactorial alopecia is being considered
  - Additional information is needed to assess degree of inflammation / treatment effect
- Site of biopsy depends on suspicion for non-scarring vs. scarring process
  - Use a dermatoscope to assess for presence/absence of follicular ostia
    - Be wary that dermoscopy in skin of color shows “pinpoint white dots” and that eccrine ostia can be mistaken for retained follicular ostia despite scarring alopecia
  - For suspected non-scarring process: choose the “worst” area of involvement
  - For suspected scarring process: choose the “advancing border” or an area where hair is still present with erythema or scale
    - Avoid heavy zones of inflammation (pustule, fluctuant nodule)
    - Avoid tufted areas (polytrichia)
  - If you are not sure if the process is scarring or not, follow the protocol for non-scarring alopecia
- If your differential diagnosis is androgenetic alopecia and/or telogen effluvium:
  - One biopsy from the most thinned area of the frontal scalp or crown
  - Second biopsy from the occipital scalp
- If the alopecia is subtle, consider biopsy of “normal” scalp for comparison
- Use between 1-3 mL of lidocaine/epinephrine mix and let sit for ~15 minutes
- Always use a 4 mm punch biopsy
- Consider use of hemostatic gelatin foam instead of suture
  - If using suture, choose a contrasting color to the patient’s hair
- Use punch in direction of hair growth, since hairs grow at an angle
- Always include subcutaneous fat for evaluation of hair bulbs
- Include the patient’s race, pattern of hair loss and specific scalp location on the requisition form (e.g., occipital scalp)
  - Alternatively, submit photographs
- Utilize a dermatopathologist who can interpret horizontal sections
BIOPSY OPTIMIZATION FOR DIRECT IMMUNOFLOUORESCENCE

- A 4 mm punch is preferred
- If splitting a biopsy, use at least a 5 mm punch
- Put the specimen in Michel’s media, or the media supplied by your laboratory
- Saline is a good option, if you can deliver to lab in <48 hrs
- If considering connective tissue disease
  - Biopsy within a well-established lesion (> 6 months old is preferred)
- “Lupus band test” of uninvolved, sun-protected skin has largely been supplanted by serologic markers
- If considering porphyria
  - Biopsy lesional skin
- If considering vasculitis, including urticarial vasculitis
  - Biopsy a new lesion (<24-48 hrs old)
  - If a new lesion is not available, then biopsy perilesional/uninvolved skin
- If considering immunobullous diseases
  - Biopsy uninvolved, perilesional skin or mucosa OR minimally inflamed skin without bulla formation

REFERENCES