

CYTOPATHOLOGY ROTATION

Site: University of Florida-Gainesville/ Shands North & South Tower

Faculty:

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Larry J. Fowler, M.D., **Cytology Director** (4-4959)
Jacquelyn Knapik, M.D. (4-3887)
Li Lu, M.D, PhD (63-6440)
Demaretta Rush, M.D. (5-3364)
Edward Wilkinson, M.D. (4-4962)
Anthony Yachnis, M.D., Anatomic Pathology Director (4-4951)
Current Cytopathology Fellow
Charlene M. Lewis, CT (ASCP) Supervisor
Deborah A. Carroll, CT, (ASCP)
Patricia Christensen, CT (ASCP)
David A. Lemire, CT (ASCP)

Rotation Periods: 12 weeks for CORE Rotation broken into three 4 week rotations (a portion of the 12 weeks may be on the VA Hospital Cytology Rotation). Offered all 12 months of any training year.

I. General Organization:

The cytopathology core rotation consists of three 4 week rotations (total 12 weeks) routinely placed within the 1st thru 4th PGY training years of a 4 year APCP training program. The CORE rotation may also be done in one combined 12 week rotation upon special request.

Cervical biopsies and local gynecologic excisions are signed out in tandem with cytology specimens (correlation of surgical and cytologic specimens). The first 4 week's rotation, residents review the day's cases at the time of sign-out with the faculty member on service. During the second and third 4 week rotations residents preview cases before sign-out, render preliminary interpretations, and receive feedback at sign out (graduated responsibility). Fellows preview the slides before sign-out and render interpretations, and have the option to attend sign-out or receive feedback from the attending pathologist later (graduated responsibility). Access to concurrent or prior cytology or surgical pathology materials is readily available for correlation with active cases. Residents and/or fellows attend FNA procedures to evaluate specimen adequacy, provide a preliminary interpretation, and gain experience performing FNAs (needle aspirations). Trainees attend a monthly cytopathology lecture series, with at least four of these lectures given by the cytopathology fellow (ACGME competency: #3: Practice-Based Learning). Residents are also expected to attend all Cytopathology QA conferences at Shands held weekly. Resident collaboration on research projects is encouraged and fellow collaboration on research projects is expected (ACGME competency: #3: Practice-Based Learning). Ancillary studies, such as immunochemistry, flow cytometry, in-situ hybridization testing and electron microscopy are available for service, teaching and research purposes. Trainees are encouraged to critically review the literature about interesting cases they encounter on service or through teaching or research; textbooks, atlases and glass slide study sets are also available. As appropriate to the individual case or consultation under review, the ethical, socioeconomic, medicolegal, and cost-containment issues are reviewed and discussed (ACGME competency: #6: Systems-Based Practice). As well, research design, statistics and critical review of the literature are discussed. By use of the literature, Medline, ImmunoQuery, and textbooks, the resident is trained to become a lifelong, system-based learner.

II. Rotation Goals:

Medical Knowledge & Patient Care Competencies: Understanding of proper collection, processing, and interpretation of gynecologic and non-gynecologic cytology specimens (including FNA both by palpation and ultrasound guided).

Interpersonal and Communication Skills & Systems-based Practice Competencies: Knowledge of basic principles to enable transmission of the cytological diagnosis in an informative, timely, and succinct way that best serves patient and clinician needs utilizing communication skills and laboratory information systems.

Laboratory-based learning and improvement competency: Understanding of principles of data management for quality assurance, billing, and clinical research.

Professionalism competency: Understanding of the need for commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient and clinician population as well as to research.

III. Rotation Objectives:

- The trainee should be able to view any Gyn Pap test and properly classify by The Bethesda System 2001 utilizing both conventional smear and liquid-based preparations. They should also be able to generate and communicate their opinion for proper management. If given a 10 slide quiz 70% of the slides should be able to be properly classified (within one gradation of classification). (**Competencies[^] PC, MK, PBLI, IPCS, SBP**)
- Able to list the common inflammatory etiologies as well as identify them as they apply to gynecological samples. (**PC, MK**)
- Able to suggest a variety of methods for confirmation of HPV (human papillomavirus) and other infective agents utilizing histochemical, immunochemical and molecular diagnostic techniques in a cost-effective manner for gynecological and non-gynecological samples. (**PC, MK, PBLI, IPCS, P, SBP**)
- Able to recite the criteria for unsatisfactory Pap tests and the quality indicators for the Bethesda 2001 terminology. (**PC, MK, PBLI**)
- Able to explain proper performance of a Pap test for a clinician utilizing both conventional smear and liquid-based collection methods. (**PC, MK, PBLI, IPCS, P**)
- Able to detail potential slide labeling discrepancies and list differences between conventional smear, ThinPrep® and SurePath® Pap test preparations. (**PC, MK, PBLI, SBP**)
- Able to give causes for common slide artifacts (ie: cornflakes, finger cells, etc.) for both conventional smears and liquid-based systems. (**PC, MK, PBLI, SBP**)
- Able to give reasonable suggestions for clinical follow-up based upon Pap test interpretations as defined by national guidelines. (**PC, MK, PBLI, IPCS, P, SBP**)
- The trainee should be able to view any body site cytology and properly classify as negative, inflammatory, atypical/suspicious, neoplastic, or malignant for both aspiration and exfoliative specimens. They should then be able to generate and communicate their opinion for proper patient management. If given a 10 slide quiz 70% of the slides should be able to be properly classified. (**PC, MK, PBLI, IPCS, SBP**)
- Able to list the common inflammatory etiologies as well as identify them in reference to body site of the non-gynecological sampling. (**PC, MK, PBLI**)
- Able to recite the criteria for unsatisfactory or limited specimens dependent on body site and be able to communicate them in a concise and cordial manner. (**PC, MK, PBLI, IPCS, P, SBP**)
- Able to explain and demonstrate proper performance of FNA to a clinician. (**PC, MK, PBLI, IPCS, P**)
- Able to recite potential FNA procedural complications to a patient. (**PC, MK, IPCS, P**)
- Will have performed a minimum of 10 diagnostic FNAs on patients under supervision. (**PC, PBLI**)
- Able to properly triage an FNA specimen based upon a "provisional diagnosis". (**PC, MK, PBLI, SBP**)

- Able to give reasonable suggestions for clinical follow-up based upon FNA or other non-gynecological cytology result. (**PC, MK, PBLI, IPCS, SBP**)
- Able to list and explain choices for continuous quality assurance monitors for both gynecologic and non-gynecologic cytology specimens. (**PC, MK, PBLI, IPCS, P, SBP**)
- Able to list the components of the FNA procedure and interpretations that are professionally billable by the pathologist. (**IPCS, P, SBP**)
- Able to identify a contaminant and know how to confirm it and deal with the problem for quality assurance, continued quality improvement, and diagnostic purposes. (**PC, MK, PBLI, IPCS, P**)
- Able to identify and demonstrate steps in managing potential complications of FNA such as pneumothorax, arterial bleed, fainting, secondary infections, and needle-stick injury. (**PC, MK, PBLI, IPCS, P**)
- Able to prioritize work, dealing with urgent cases first. (**PC, PBLI, IPCS, P, SBP**)
- Able to explain the importance of routinely checking all prior and subsequent histology on cytology cases for quality assurance. (**PC, MK, PBLI, IPCS, P, SBP**)
- Able to explain and demonstrate proper triage of specimens for ancillary testing based upon rapid interpretation of cytological specimens (especially radiologically-guided FNAs but not limited to) and final preparations. (**PC, MK, PBLI, IPCS, P, SBP**)

^ Abbreviations for six general competencies:

PC = Patient care, MK = Medical knowledge, PBLI = Practice-based learning and improvement, IPCS = Interpersonal and communication skills, P = Professionalism, SBP = Systems-based practice.

IV. Outcomes Assessment (trainee evaluations):

Subjective Evaluations: The standard competency-based trainee evaluation will be completed at the end of each 4 week time period by the rotation director or their designee with input from cytology fellow, cytology staff and clinicians (360 degree evaluation), simulations of FNA procedure (using the "Blue Phantom" ultrasound model), and oral testing. If the trainee performance is perceived as unsatisfactory at anytime during the rotation it should be discussed in a timely fashion prior to the end of the rotation. Trainees may also have other rotation faculty complete their evaluation if they wish to add to the rotation director's evaluation.

Objective Evaluations: During the rotation the resident will complete any CAP in-service exam (Gyn or Non-Gyn). At the option of faculty if performance is considered below average subjectively or if the Residency Program Director feels that based upon RISE performance that the resident's knowledge subsequent to a the rotation is below average then objective exams may be given.

A 10 case glass slide examination of gynecological smears and/or liquid preps utilizing the Bethesda Classification System (2001) may be given at the end of the second 4 week rotation. 70% of the slides should be able to be properly classified (as WNL, inflammatory, LGSIL, HGSIL, etc as per CAP or ASCP glass slide review) for passing. If less than 70% is obtained the test is repeated then or during the 3rd four week rotation.

At the end of the second or third 4 week rotation a 10 case glass slide examination of Medical cytology cases may be given. 70% of the cases should be properly classified as negative, inflammatory, atypical/suspicious or indeterminate, or malignant. If less than 70% is obtained the test must be repeated within one week of the end of the rotation.

A 20 question short answer or multiple choice test may be given at the end of the third 4 week rotation , again a minimum of 70% correct is required for passing. Continued failure on these tests will necessitate further time in cytopathology until such knowledge and skills are obtained.

V. Suggested Text References:

- Solomon D, NayerR, The Bethesda System for Reporting Cervical Cytoplogy, Springer 2nd Edition
- <http://caonline.amcancersoc.org/cgi/reprint/52/6/342.pdf> for ACS screening guidelines
- <http://bethesda2001.cancer.gov/terminology.html> for Bethesda 2001 terminology
- <http://www.asccp.org/consensus/cytological.shtml> for colposcopy guidelines by TBS
- DeMay R, The Art & Science of Cytopathology, ASCP Press or the abbreviated one book text by DeMay (also by ASCP Press)..
- Bibbo M Editor, Comprehensive Cytopathology, Saunders
- Geisinger, et al, Modern Cytopathology, Curchill-Livingstone

VI. Resident Duties & Responsibilities (outline):

- A. Residents and Fellow will be expected to be available for FNA aspirations and daily Gyn & Medical cytology sign-out from the hours of 8:30 AM to 5:30PM Monday through Friday except with excused absences or for attendance at required conferences.
- B. Any unexpected absence or tardiness should be communicated as quickly as possible to the cytology attending of the day or cytopathology fellow.
- C. The resident is responsible for previewing the majority of Gyn and Medical cytology cases each day as well as attendance at the Thursday FNA Clinic.
- D. The resident is responsible for verbally communicating all malignant diagnoses to the clinician of record and documenting following attending review of diagnoses following attending finalization of the case. All FNA preliminary diagnoses or adequacy should also be communicated at the time of "provisional" diagnosis if the trainee is in attendance at clinician performed FNAs.
- E. The resident will be responsible in to attend and participate with attending and fellow for the monthly cytology teaching and Cytology Challenges when a Fellow is not on service.
- F. The resident and fellow will be share some responsibility with the attending staff in instruction and teaching of cytotechnologists, medical students and other students or trainees.

VII: Rotation Outline for the 3 month core:

Week 1:

- A. On day 1 meet with the Director of Cytopathology or their designee and Fellow for direct hands on instruction of performance of FNA, followed by introduction to the cytology personnel.
- B. During the first week at least 2 hours of one day should be spent in the processing area reading the laboratory manual and with hands-on instruction of cytological preparation and staining methods.
- C. Practice FNA technique on the "Blue phantom" and fresh gross room specimens. The resident must keep a log of FNAs performed/observed. This information is kept in the resident's file for completing the application for Pathology Boards.
- D. Read "The Bethesda System" text utilizing references to flesh out the cytological findings of squamous intraepithelial lesions and how it applies to the cervical biopsy grades of dysplasia, and current suggested clinical follow-up. Learn criteria for unsatisfactory Pap test and "limiters" of Bethesda 2001.
- E. Review with attending a minimum of 1 tray (appx. 20) Gyn cytology slides per day.
- F. Be available for daily FNAs as well as FNA Clinic on Thursday morning and throughout rotation.

Week 2:

- A. Begin reviewing book chapters on glandular atypia while reviewing findings of glandular atypia in "The Bethesda System" booklet.
- B. 10 slides might be prescreened by resident (before cytotechnologist screens) then follow the slides through "the system" to determine final outcome.

- C. Begin study of Gyn study packets this should be continued throughout the core rotation.
- D. Review all abnormal Gyn (as time allows), all Medical cytologies with Cytopathology Attendings on a daily basis and continue throughout rotation.

Week 3:

- A. Review and study in depth the various inflammatory conditions affecting the cervical smear including but not limited to Herpes simplex, shift in bacterial flora, Chlamydia, Candida, Actinomyces, Trichomonas & Leptothrix.
- B. Continue above duties from weeks 1 & 2.

Week 4

- A. Study in-depth post therapeutic changes (ie: postradiation changes, Tamoxifen, depoprovera, etc.).
- B. Be able to interpret hormonal maturation.
- C. Be cognizant of the recommended clinical guidelines for follow-up and management based upon Bethesda classification as suggested by the ASCCP, ACOG, & ACS.

Week 5:

- A. Begin reviewing book chapters on respiratory and urinary cytology.
- B. Continue at least 1 tray of Gyn slide sign-out review daily and all non-Gyns & FNA (throughout rotation).
- C. Begin study of NonGyn study packets for respiratory and urinary cytology.

Week 6:

- A. Begin reviewing book chapters on CSF and body fluid cytology.
- B. Continue a minimum of 1 tray of Gyn slide sign-out review daily and all non-Gyns & FNA (throughout rotation).
- C. Begin study of NonGyn study packets for CSF and body fluids cytology (pleural effusions, paracentesis & pelvic washes).

Week 7:

- A. Begin reviewing book chapters on gastrointestinal & bile duct cytology.
- B. Continue minimum of 1 tray of Gyn slide sign-out review daily and all non-Gyns & FNA (throughout rotation).
- C. Begin study of NonGyn study packets for gastrointestinal tract and bile duct brushing cytology.

Week 8:

- A. Begin reviewing book chapters on breast cytology (FNA and nipple discharge).
- B. Continue minimum 1 tray of Gyn slide sign-out review daily and all non-Gyns & FNA (throughout rotation).
- C. Begin study of NonGyn study packets for breast cytology.

Week 9:

- A. Begin reviewing book chapters on head & neck cytology (salivary gland & thyroid).
- B. Continue minimum 1 tray of Gyn slide sign-out review daily and all non-Gyns & FNA (throughout rotation).
- C. Begin study of NonGyn study packets for salivary gland, thyroid & other head & neck cytology.

Week 10:

- A. Begin reviewing book chapters on abdominal & retroperitoneal FNA cytology.
- B. Continue minimum 1 tray of Gyn slide sign-out review daily and all non-Gyns & FNA (throughout rotation).
- C. Begin study of NonGyn study packets for abdominal & retroperitoneal FNA cytology.

Week 11:

- A. Begin reviewing book chapters on lymph node cytology.
- B. Continue minimum 1 tray of Gyn slide sign-out review daily and all non-Gyns & FNA (throughout rotation).

C. Begin study of NonGyn study packets for lymph node cytology.

Week 12:

A. Present during Tuesday noon QA educational session (may be Cytology/histology correlation pitfalls, interesting case review or journal article dealing with cytology).

B. Continue minimum 1 tray of Gyn slide sign-out review daily and all non-Gyns & FNA (throughout rotation).

VIII. Rotation Review

Rotation Director

Date

Residency Director

Date