Unit directors:
- Marino E. Leon, MD
- Peter Drew, MD

Goals and Objectives:

Rotation Goals (Six General Competency Based):
- **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.

Rotation Objectives (Six General Competency Based):
Abbreviations for six general competencies:
- PC = Patient care
- MK = Medical knowledge
- PBLI = Practice-based learning and improvement
- IPCS = Interpersonal and communication skills
- P or PROF = Professionalism
- SBP = Systems-based practice

- The trainee should be able to view any Gyn Pap test and properly classify by The Bethesda System Reporting Cervical Cytology. They should also be able to generate and communicate their opinion for proper management. If given a 10-slide quiz, 90% of the slides should be properly classified (within one gradation of classification). (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 2014 terminology. (PC, MK, PBLI)
- Able to explain proper performance of a GYN Pap test for a clinician. (PC, MK, PBLI, IPCS, P)
- Able to detail potential slide labeling discrepancies and list differences between ThinPrep® and SurePath® Pap test preparations. (PC, MK, PBLI, SBP)
- Able to give causes for common slide artifacts (ie: cornflakes, etc.) (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 anybody 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 2 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)
Rotation Goals & Objectives (Milestones Based*):

*See Dr. Leon for Levels and Expectations of Residents (Levels 1-3) versus Fellows (Levels 4-5)

NOT achieving Level 1 (minimum) in ANY of these areas should be considered reason to repeat the rotation.

- PC1 — Patient safety: Demonstrates attitudes, knowledge and practices that contribute to patient safety; recognition of errors and discrepancies.
- PC2 — Procedure: Performing fine needle aspiration biopsies: Demonstrates attitudes, knowledge and practices that enable proficient history taking, physical examination, fine needle aspiration (analysis and appraisal, synthesis, assembly and reporting of findings)
- MK1 — Interpretation and Diagnostic Knowledge: Demonstrates attitudes, knowledge, and practices that support the interpretation, analysis, formulation, and generation of reliable diagnoses
- MK2 — Interpretation and Diagnostic Knowledge: Demonstrates attitudes, knowledge, and practices that support the interpretation, analysis, formulation, and generation of reliable diagnoses in cervical cancer screening
- SBP1 — Regulatory and Compliance: Accreditation Management
- SBP2 — Healthcare teams
- SBP3 — Lab Management: Resource Utilization (personnel and finance)
- SBP4 — Lab Management: Technical Management
- SBP5 — Lab Management: Quality, risk management and laboratory safety: Explains, recognizes, summarizes and is able to apply quality improvement, risk management, and safety issues
- PBLI1 — Scholarly Activity: Analyzes and appraises pertinent literature, applies scientific method to identify and interpret evidence-based medicine and apply it clinically
- PBLI2 — Evidence-based Utilization
- PROF1 — Receiving and Providing Feedback
- PROF2 — Accountability, Honesty and Integrity
- PROF3 — Cultural Competency
- PROF4 — Professionalism: Demonstrates personal responsibility to maintain emotional, physical, and mental health
- ICS1 — Communication with Healthcare Providers, Families, and Patients (as applicable)
- ICS2 — Personnel Management and Conflict Resolution
- ICS3 — Intra- and Inter-departmental and Healthcare Clinical Team interactions: Displays attitudes, knowledge, and practices that promote safe patient care through interdisciplinary team interactions
Recommended Reading:

There are several excellent textbooks available that should be used as references. These would include (but are not limited to):

- Updated Consensus Guidelines on the Management of Women with Abnormal Cervical Cancer Screening Tests and Cancer Precursors
  - [http://www.asccp.org/asccp-guidelines](http://www.asccp.org/asccp-guidelines)
- Ali SZ, Cibas ES. The Bethesda System for Reporting Thyroid Cytopathology. 2018. Springer International Publishing. 2nd Ed.
- Cibas ES, Ducatman BS. Cytology Diagnosis Principles and Clinical Correlates. 2014. Elsevier. 4th Ed.
- Geisinger, et al, Modern Cytopathology, Churchill-Livingstone

Conferences:

- The resident is expected to discuss expected attendance with the fellow and faculty at the beginning of their rotation.
- Conferences should be attended when possible as these are especially educational and examples of multidisciplinary conference and patient management.
  - Monthly Cytopathology lecture series
    - Site: N1-18
    - 3rd Friday of the month, with at least four of these lectures given by the cytopathology fellow
  - Cytology QA Session
    - Site: N1-18
    - Monthly (Third Thursday of the month at 12:00 noon), or as needed (optional, First Thursday of the month)
    - Consult with Cytology Fellow
Cytopathology Faculty:
Marino E. Leon, MD  ext 7-9260 or 627-9260
  Cytopathology Director
  Cytopathology Fellowship Director
  Resident Rotation Director
Peter Drew, M.D.  ext 7-9259 or 627-9259
  Cytopathology Associate Director
Zahra Aly, MD, PhD  273-6932
Jacquelyn Knapik, M.D.  273-9516
Faisal Mukhtar, M.D.  594-0487
Julia A. Ross, MD, PhD,  ext 7-2225 or 627-2225
Li Lu, M.D, PhD (63-6440)
  Supervisory Cytology Rotation Director at VA

Current Cytopathology Fellow:
Colby Cantu, MD

Cytotechnologists:
Amy Ratterman, CT (ASCP)  Supervisor  ext 7-2124 or 627-2124
Patricia Christensen, CT (ASCP)  ext 7-2126 or 627-2126
David A. Lemire, CT (ASCP)  ext 7-2122 or 627-2122
Deborah A. Carroll, CT (ASCP)  ext 7-2123 or 627-2123
Kelly Ardis, CT  ext 7-2125 or 627-2125

Additional Information:

Site: University of Florida-Gainesville/ Shands North & South Tower and Regional VA Hospital

- Cytology Laboratory at Rocky Point (Preparation area)
  - Ext 7-2120 or 627-2120
  - Ext 7-2121 or 627-2121
  - Ext 7-2119 or 627-2119
  - FAX: 627-2017

- Cytology-North Tower FNA  Ext 4-4937
  - Cytology Fine Needle Aspiration (FNA) cell 352-246-5358.

- Cytology-South Tower FNA  Ext 2-8968
  - South Tower Cytotech Pager  413-5351
Rotation Periods:

- The cytopathology rotations may consist of three **4-week rotations** (total 12 weeks) routinely placed within the 1st thru 4th PGY training years of a 4-year AP/CP training program.
- **VA Cytopathology Rotation (4 week - Elective)**
  - 4-weeks rotation at Malcom Randall Veterans Affairs Medical Center (VA)
    - 4-week block
- **Cytopathology Core Rotations (8 weeks, offered all 12 months of any training year)** broken into:
  - Shands Hospital
    - 4-week block
  - Shands Hospital
    - 4-week block

I. General Organization:

- **The VA hospital** Cytology Rotation block is done under Dr. Li Lu's Direction
  - Non-GYN and FNA cytology experience.
  - Limited GYN cytology experience.
- **The Shands Hospital Cytopathology Core Rotations**, are usually done during the 2nd - 4th residency year of a combined AP/CP program.
  - At Shands Hospitals, the Cytopathology Unit service rotations are broken in two separate services with a responsible faculty per day.
    - Non-GYN and FNAs service (“MED cyto”)
    - GYN cytology service
      - Cervical biopsies
      - GYN cytology specimens
      - Correlation of surgical and cytologic specimens is emphasized.
  - During the Core 4-week rotations, residents preview cases before sign-out, render preliminary interpretations, and receive feedback at sign out (graduated responsibility).
  - Residents & Fellows preview the slides before sign-out and render interpretations.
  - Access to concurrent or prior cytology or surgical pathology materials is readily available for correlation with active cases.
  - Rotation, residents review the day's cases at the time of sign-out with the faculty member on service.
Residents & Fellows have the option to attend sign-out or receive feedback from the attending pathologist later (graduated responsibility).

Residents and/or fellows attend Fine Needle Aspiration (FNA) procedures performed in the Hospital and Clinics to evaluate specimen adequacy, provide an adequacy interpretation, and gain experience performing FNAs (needle aspirations).

Trainees attend the Monthly Cytopathology lecture series

Residents are also expected to attend all Cytopathology QA conferences at Shands

Residents & Fellows are expected to teach medical students, other specialty residents and fellows, AP/CP residents, and trainees.

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, electron microscopy, and molecular studies 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. 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), observation of simulations of FNA procedure (using the "Blue Phantom" ultrasound model) and oral testing.
  - If the trainee performance is perceived as unsatisfactory at any time 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 and fellow 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 the rotation is below average then further objective exams may be given.
Cytopathology Rotation AP/CP Residency Program

- **A 10-case** glass slide examination of gynecological smears and/or liquid preps utilizing the The Bethesda System for Reporting Cervical Cytology (2014) may be given at the beginning and at the end of the Second 4-week rotation.
  - 90% of the slides should be able to be properly classified (as NILM, NILM inflammatory, LGSIL, HGSIL, etc as per CAP or ASCP glass slide review) for passing.
  - If less than 90% is obtained the test is repeated.

- At the beginning and the end of the Second or Third 4-week rotation, a **10-case** glass slide examination of Non-GYN and FNA cytology (“MED 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 20-25 question short answer or multiple choice test may be given at the beginning and at the end of the Second 4 week rotation
  - Again, a minimum of 70% correct is required for passing.

- Continued failure on these tests may necessitate further time in cytopathology until such knowledge and skills are obtained.

- Per published Cytopathology Milestones ACGME WorkGroup "Worksheet" for Cytopathology Fellows see the recommended "Evaluation Methods" for each published "Milestone".
  - Residents (Years 1-4) should only be expected to achieve levels 1-3.
  - Below level 1 should be considered "failing" and above 3 should be considered "honors".

### III. Resident Duties & Responsibilities (outline):

A. Residents and Fellow will be expected to be available for FNA aspirations and daily GYN & NonGYN and FNA (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 FNA Clinic.

D. If the trainee attended the procedure, all FNA adequacy interpretation should be communicated to the clinician performing the FNA procedure and documented in the Rapid On Site Evaluation form immediately at the time of the procedure

E. A "provisional" diagnosis may be given in a case; please consult with responsible faculty. This interpretation should be communicated to the clinician and documented in the report.

F. If required, the resident may be responsible for verbally communicating malignant diagnoses to the clinician of record and facilitating this documentation in the report following attending review of diagnoses and following attending “final release” or “verification” of the case.

G. The resident will be responsible to attend and participate with attending and fellow for the Monthly Cytology Teaching and Cytology Challenges when a Fellow is not on service.

H. The resident and fellow will 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 4 week Cytology Core Rotation at Shands:

**Week 1:**
A. On day 1, he or she will 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 the ultrasound machine prior to FNA clinic. Practice FNA technique in 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 as well as on the ACGME log site.
D. Read "The Bethesda System for Reporting Cervical Cytology" monograph utilizing references to flesh out the cytological findings of squamous intraepithelial lesions and how it applies to the cervical biopsy grades of intraepithelial lesions, and current suggested clinical follow-up. Learn criteria for unsatisfactory Pap test.
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 Wednesday morning and throughout rotation.
G. Attend a least 2 FNA procedures with the cytopathology fellow, learn the cytology procedures for rapid on site evaluation and immediate assessment, and be able to render the immediate assessment to the physician or physician assistant performing the procedure. In the following weeks, the resident will attend the procedure independently. The cytopathology fellow will act as a consultant.

**Week 2:**
A. Begin reviewing book chapters on glandular atypia while reviewing findings of glandular atypia in "The Bethesda System for Reporting Cervical Cytology" manual
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” cytology cases with Cytopathology faculty on a daily basis and continue throughout rotation.
E. 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.
F. Study in-depth post therapeutic changes (ie: postradiation changes, Tamoxifen, Depo-Provera, etc.).
G. Be able to interpret hormonal maturation.
H. Be cognizant of the recommended clinical guidelines for follow-up and management based on “The Bethesda System for Reporting Cervical Cytology" as suggested by the ASCCP, ACOG, & ACS.
I. Begin study of NonGyn. Review Respiratory cytopathology chapters as well as reviewing pulmonary teaching packets
J. Continue above duties from weeks 1 &2.

**Week 3:**
A. Begin reviewing the Paris system for Urinary Cytopathology, book chapters on urinary cytology and review study packets for urinary cytology.
B. Continue at least 1 tray of GYN slide sign-out review daily and all Non-GYN & FNA (throughout rotation).
C. Begin reviewing book chapters on CSF and body fluid cytology.
D. Begin study of NonGyn study packets for CSF and body fluids cytology (pleural effusions, paracentesis & pelvic washes).
E. Begin reviewing book chapters on gastrointestinal & bile duct cytology.
F. Begin study of NonGyn study packets for gastrointestinal tract and bile duct brushing cytology.
G. Begin reviewing book chapters on breast cytology (FNA and nipple discharge).
H. Begin study of NonGyn study packets for breast cytology
I. Continue minimum 1 tray of GYN slide sign-out review daily and all non-Gyns & FNA (throughout rotation).

Week 4:
A. Begin reviewing book chapters on head & neck cytology (salivary gland & thyroid)
B. Begin study of NonGyn study packets for salivary gland, thyroid & other head & neck cytology.
C. Begin reviewing book chapters on abdominal & retroperitoneal FNA cytology
D. Study of NonGyn study packets for abdominal & retroperitoneal FNA cytology
E. Review book chapters on lymph node cytology and review teaching packets
F. Continue minimum 1 tray of Gyn slide sign-out review daily and all non-Gyns & FNA (throughout rotation).
G. Present during Tuesday noon QA educational session (may be Cytology/histology correlation pitfalls, interesting case review or journal article dealing with cytology).
H. Take the self-study 20-25 questions from Dr. Leon and review with him when complete.
I. Review performance with assigned faculty for suggestions.

VIII. Rotation Review

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