

**LEARNING OBJECTIVES: EL PATHOLOGY ANATOMIC PATHOLOGY/LABORATORY MEDICINE COMBINED ELECTIVE**

<b>Overarching Goals of Curriculum</b>	<b>Elective objectives: By the end of the rotation, students will be expected to:</b>	<b>Where/how taught</b> <i>(location or learning activity)</i>	<b>Taught by</b> <i>(attending, fellows, etc.)</i>	<b>How student's achievement of objective is assessed</b> <i>(assessment method)</i>	<b>How feedback is given</b> <i>(feedback method)</i>	<b>Quantity target</b> <i>(target number of patients/ events during rotation)</i>
1, 2, 3, 4, 5, 6	1. <b>History skills:</b> Gather the important information that is needed for the evaluation of specimens in anatomic pathology.	Gross room, Sign-out room/ Grossing Manual and Demonstration	PA, Resident or Attending Pathologist	<ul style="list-style-type: none"> <li>Review of preliminary pathology reports</li> </ul>	Verbal	5-10/week
1, 2, 3, 4, 5	2. <b>Physical examination skills:</b> Complete a gross examination and dissection of at least 5-10 specimens per week. The student should demonstrate the ability to perform this gross dissection while being observed by at least one attending or resident.	Gross Room/ Grossing Manual and Demonstration	PA, Resident or Attending Pathologist	<ul style="list-style-type: none"> <li>Direct observation</li> <li>Review of preliminary pathology reports</li> <li>Review of histologic slides prepared from submitted tissue sections</li> </ul>	Verbal	5-10/week
1, 2, 3, 4, 5, 6, 7, 8	3. <b>Knowledge/diagnostic and treatment skills:</b> Know about common pathologic conditions seen on the relevant subspecialty service (for example, GI pathology).	Sign-out room/ Assigned reading, Questioning during sign-out	Resident or Attending Pathologist	<ul style="list-style-type: none"> <li>Review of preliminary pathology reports</li> <li>Oral assessment</li> </ul>	Verbal	5-10/week
4	4. <b>Procedural skills:</b> Perform Gross Dissection for the common specimens seen on the relevant subspecialty rotation.	Gross Room	PA, Resident or Attending Pathologist	<ul style="list-style-type: none"> <li>Direct Observation</li> </ul>	Verbal	1 per week
4, 5, 6	5. <b>Attitude:</b> Demonstrate professional responsibility in working as a team member with other members of the subspecialty service team, technical and support staff.	Gross Room, Sign-out room	PA, Resident or Attending Pathologist	<ul style="list-style-type: none"> <li>Direct Observation,</li> <li>360° evaluation</li> </ul>	As needed	As needed
5, 6, 8	6. <b>Career/context:</b> Know the training/career pathway for Anatomic Pathology.	Sign-out room/ informal discussions	Resident or Attending Pathologist	<ul style="list-style-type: none"> <li>Oral assessment</li> </ul>	As needed	As needed

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1, 2, 3, 4, 5, 6	<p><b>1. Laboratory Manifestation of Diseases.</b> Know the laboratory manifestations of major diseases and how to interpret laboratory information.</p> <p>Know the most common lab findings for the following diseases:</p> <p>CMV, HIV, influenza Diabetes, hypothyroidism, drug overdose Anemia, leukemia, lymphoma, coagulation abnormalities Transfusion reactions Autoimmune diseases, common genetic disorders Tuberculosis, community acquired pneumonia, sepsis</p>	<p>Clinical laboratories at YNH and VA-CT</p> <p>Sit at bench with knowledgeable teacher</p> <p>Didactic teaching conferences</p>	Follow resident or fellow in each laboratory, including weekend call.	Student will work up and present cases for discussion	Verbal feedback on presentations, and during discussions	Informally present 2-4 patients to residents, chief resident, fellows and/or faculty during the 2 week rotation
1, 2, 3, 4, 5	<p><b>2. Appropriate Usage and Interpretation of Laboratory Tests:</b> Know the indications for ordering common laboratory tests, for example</p> <ol style="list-style-type: none"> <li>Know the appropriate test to order for diseases above depending on the clinical context.</li> <li>Name at least 3 common mistakes that clinicians make in ordering laboratory tests</li> <li>Describe the first line therapy for each of these conditions</li> <li>Participate in test "sign out" if available</li> </ol>	See above	See above	See above	See above	
1, 2, 3, 4, 5, 6, 7, 8	<p><b>3. Laboratory Procedural Skills:</b> Students will have a choice of laboratory procedures to observe in each laboratory, including:</p> <p>Virology: PCR, serology, viral culture, immunofluorescence Blood bank: blood typing, antibody screening, pheresis Immunology: antinuclear antibody testing, immunofixation electrophoresis, flow cytometry Toxicology; urine toxicology screening</p>	In appropriate laboratory	Residents, fellows, attendings, laboratory staff	Discussion and observation. If students perform any test interpretations, they should get feedback	Verbal	1-3 selected procedures per lab depending on test complexity

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	<p>Microbiology: bacterial culture and sensitivity testing, 16s sequencing                      Molecular diagnostics: PCR, sequencing                      Chemistry: serum chemistry panel, SPEP                      Hematology: Blood smears</p> <p>For each procedure they choose:</p> <ol style="list-style-type: none"> <li>The student should know the key indications for the procedure.</li> <li>They should know key aspects of quality assurance.</li> <li>Know elements in interpretation.</li> <li>Understand pitfalls.</li> </ol>					
<b>5</b>	<p><b>5. Attitude:</b> Demonstrate professional responsibility in working as a team member with other members of the Laboratory medicine team.</p> <ol style="list-style-type: none"> <li>The student should exhibit honesty, accuracy and integrity in all interactions with staff, residents, attendings, fellows, and others.</li> </ol>	All locations	All	Ongoing observation	Informal verbal, and by elective director at end of rotation	NA
<b>5, 6, 8</b>	<p><b>6. Career/context:</b> Know the theoretical, technological, and clinical underpinnings of the specialty of Laboratory Medicine</p> <ol style="list-style-type: none"> <li>Know the training pathways for Laboratory medicine.</li> <li>Know 3 aspects of career satisfaction in this specialty.</li> <li>Know key roles that Laboratory Medicine plays in the health care system.</li> </ol>	As above, meet with residency director	Interactive discussions with all.	Ongoing	Meeting with elective director at end of rotation	