Frequently Asked Questions

Q: What is the structure of the pathology residency program at UNC?
A: UNC sponsors an anatomic and clinical residency program. It is a 4 year program that has anatomic and clinical pathology integrated over all 4 years. It is accredited by the ACGME. There are 26.5 months of required AP rotations, 18 months of required CP rotations (including 4 selectives), and 3.5 additional elective months which may be either AP or CP electives. There are a total of 7.5 elective/selective months.

Q: How many resident positions are in the program?
A: We are currently accredited for 17 residents. For the 2018 match, we are seeking 4 PGY1 positions, all through the residency match.

Q: Where can I find information about the curriculum and rotations?
A: A copy of the block rotation diagram and descriptions of each rotation may be found on our website.

Q: It looks like Surgical Pathology has the most number of rotations, covering 15 months. How is that organized?
A: UNC Surgical Pathology uses an integrated approach to gross and microscopic diagnosis for all assigned resident cases. The result is uniformity in the training experience, improved skills development, and an appropriate balance of time devoted to gross and microscopic pathology across all years of training. Cases assigned to each resident assure the development of high levels of proficiency and expertise in diagnostic surgical pathology. Daily cases include a broad spectrum of specimen types to assure adequate preparation in work-up of diverse pathologic processes.

Simultaneous development of gross and microscopic diagnostic skills mimic actual practice, starting in PGY1 and continue throughout all years of training. This includes an emphasis on the early development of light microscopic diagnostic skills, differential diagnosis, ancillary techniques, and reporting from the beginning of residency. We emphasize microscopic preview starting in PGY-1 with a rapid and sustained development of diagnostic skills throughout all years of residency. We emphasize daily face-to-face sign-out for a resident with an attending, to increase direct faculty to resident teaching, with detailed case discussion and finalization with the attending pathologist.

The educational program in gross and microscopic pathology allows residents to develop greater depth of knowledge and mastery of topics, with augmented faculty instruction at the microscope during daily sign-out and in teaching conferences. We ensure residents follow their assigned cases through all aspects of the gross exam, microscopic exam, ancillary
studies, write-up and final diagnosis, with each case followed from start to finish (ACGME requirement). Specific competencies in gross and microscopic pathology are targeted by using a resident checklist/portfolio.

Time on surgical pathology also includes rotating on our "conference/consult" service for PGY3 and PGY4 residents. This rotation includes reviewing the outside slides that come to surgical pathology for a second opinion before treatment and presenting at some of our tumor boards (including our most popular tumor boards: breast, lung, GI, GU, and ENT). This rotation allows residents to see a large number of interesting cases, see how cases were handled at other institutions, and interact with clinical teams as the "pathology expert".

The program affords an opportunity for progressive responsibility and autonomy for residents as they advance through the training program. This includes: Progressive expectations for quality of work and diagnostic accuracy with each advancing year of training; Increased case complexity with advancing years of training; Increased frozen section service autonomy for PGY3-4; Conference/consult rotations for PGY3-4; and PGY3-4 resident presentation of unknown glass slide conferences.

Q: Does UNC have Pathologist Assistants?
A: Yes, we have 6 PAs at UNC Hospitals, 4 in the gross room in surgical pathology, 1 in the main frozen section room, and 1 on the autopsy service. All are highly trained and committed to pathology resident education.

Q: What are the subspecialty benches in Surgical Pathology?
A: Breast, GYN oncology, benign GYN, GI smalls (biopsies, two separate benches because of volume), GI large specimens, GU + bone and soft tissue, ENT + pulmonary. UNC has an excellent spectrum of pathology, with all major case types represented, both complex specimens and small biopsies.

Q: Are there any surgical specimens that are not handled by Surgical Pathology at UNC?
A: Neuropathology and ophthalmology specimens come through surgical pathology, but are signed out by neuropathologists. Dermatopathology specimens are accessioned through the dermatopathology service housed in the Department of Dermatology. Residents see these specimen types on the 2 months of the dermatopathology/neuropathology rotation. Renal biopsies for medical renal diseases are handled by Nephropathology (a separate division of our Department); residents see these specimens during a 2 week rotation on this service in their PGY2 or PGY3 year. Lymph nodes and bone marrows are accessioned through Hematopathology; residents see these case types when on a hematopathology rotation. Oral biopsies are usually signed out by the Oral Pathology Laboratory in the UNC School of Dentistry. These oral pathologists are jointly appointed with UNC Pathology and are available for consultation, lectures and elective rotations. Between the main surgical pathology service and these subspecialty areas, UNC has a very complete experience in surgical pathology available to residents.
Q: What is the experience in Cytology like? Do residents get to perform fine needle aspirates?
A: There is a total of 4 months on cytology. Graduated responsibility is emphasized. Residents perform superficial FNAs in UNC hospital clinics and assist with rapid on-site evaluation of adequacy for deep aspirates in conjunction with the 5 cytotechnologists, 2 cytopathology fellows and 7 board certified attendings. This is a high volume service, there are over 1800 FNAs/year and residents become proficient in needle aspirates. Pap smears and non-gyn specimens are also abundant.

Q: Hematopathology is a popular subspecialty in pathology. Do residents get good experience in hemopath?
A: There is a total of 4 months of hematopathology (1 in each year). Residents obtain comprehensive training in the workup of bone marrows and lymph nodes for benign and malignant disease, and also become proficient in evaluation of blood smears and body fluids. Coagulation is integrated with hematopathology. Residents present cases at the multidisciplinary conference in the final years of their training.

Q: UNC is known for its molecular pathology program. What is that experience like for residents?
A: UNC has more board certified Molecular Genetic Pathology faculty than any academic center in the country, and our residents are made ready to practice by gaining skills and expertise in ordering and interpreting modern genomic tests. The Molecular Diagnostics and Cytogenetics Course is a systematic overview of pathology practice using DNA and RNA based tests. After completing this Course in 2nd or 3rd year of residency, the resident then returns to the molecular arena in 4th year for a month of immersion in day-to-day molecular pathology and immunology practice. Additional rotations and projects are available to residents.

Q: What is Blood Banking/Transfusion Medicine like?
A: Residents spend three months (2 in first year and 1 in fourth year) on the Blood Banking/Transfusion Medicine rotation which includes the blood bank, a blood donation program, and therapeutic apheresis. The first month is devoted to learning the principles of transfusion medicine and developing comfort with evaluating and caring for apheresis patients while the latter two months involve the resident taking a more active role in the direction of the service.

Q: How about the rest of Clinical Pathology? Is there much chance for active participation in the services?
A: Residents are an integral part of the laboratories while on rotation, and active learning and participation in patient care and clinical consultation is emphasized. While on clinical chemistry, residents are on first call for answering clinician questions, and while on
microbiology the resident rounds with the infectious disease team daily. As mentioned above, residents obtain extensive experience in apheresis while on the BB/TM service, and see patients, write orders and consult with clinical teams for apheresis patients.

**Q: Will I have an opportunity to take on more responsibility as I progress through the residency?**

**A:** Graduated responsibility is one of our program's core values. Rotations on all services that span multiple years have specific expectations that ensure that residents are presented with more responsibility and have the opportunity to show autonomy as they progress through the program. Our goal is that residents are able to practice competently and independently in all areas of pathology after they have completed the program. Some specific examples of graduated responsibility include:

- In surgical pathology, increased case complexity each year means that by the end of training residents will be able to independently work up all case types and write accurate reports. By PGY4 year residents are expected to be able to formulate a complete and accurate report for both routine and complex cases, be comfortable in ordering special studies, know how to accurately bill for services provided and be able to present and discuss cases with clinical teams.

- In cytopathology, upper-level residents are given time to write up cases independently and after demonstrating competency in performing fine needle aspirates and rendering accurate preliminary diagnosis, will be permitted to perform these services independently.

- In hematopathology, upper-level residents will formulate diagnoses and interpret special studies independently, and present cases at multidisciplinary conference.

- In autopsy, the upper-level resident takes on the role of teacher and mentor to the PGY1 resident.

- In transfusion medicine, the PGY4 resident functions as the acting director of the service.

**Q: What options are available for electives/selectives?**

**A:** Electives may be taken in any area of the department. Any of the laboratories welcome residents for elective rotations, and subspecialty anatomic pathology rotations can be arranged at UNC for focused study using study sets and reading suggested by faculty members (such as breast, GI, GU, etc). Away rotations can be arranged at other institutions, and the resident's salary is still paid by UNC. These must be arranged well in advance. There are opportunities for international electives, and UNC sponsors several Global Health Scholars which provides support for residents for international travel and research in global health areas. CP selectives are electives that must be taken in clinical pathology to fulfill board requirements. There are 3.5 months of electives and 4 months of CP selectives.
Senior residents typically take 4 months of CP selectives and 1 month of elective at the end of the year before sitting for the American Board of Pathology examination in the spring of their last year. Residents must complete an on-line self-instructional module on pathology laboratory management and informatics at some point during the residency; this is typically taken during one of the CP selective months in the PGY4 year as this material is directly relevant to the board exam.

Q: Do pathology residents interact with clinical teams and see patients?  
A: Our pathology residency has an unusually large number of opportunities for clinical interaction and direct patient care. Residents directly participate in a number of multi-disciplinary tumor conferences and clinical teams. Residents present pathology material at Breast, ENT, GI, Gynecologic oncology, urologic oncology and hematology/oncology tumor boards, round in the microbiology laboratory with infectious disease and present at autopsy conference. The primary venues for direct patient care are on the apheresis service and the cytology rotations.

Q: What opportunities are available for research in the department?  
A: Our department is a rich environment for research. There are approximately 50 research faculty members with primary academic appointments in pathology who welcome participation by pathology residents. UNC is home to a comprehensive cancer center, and many multidisciplinary research endeavors need participation by pathology and residents are welcome to participate in these activities. The clinical faculty engage in translational research and welcome participation by residents.

Q: What is the didactic educational program for residents?  
A: Every morning 8–9 am (except Thursdays where grand rounds seminars are held 8:30–9:30) there is a required educational conference for residents. These include didactic lectures on a wide variety of AP and CP topics, rotating over a 2 year cycle, gross conferences, unknown slide conferences, morbidity and mortality conferences and CP conferences with presentations by residents and fellows to allow experiences in public speaking and constructing a lecture. Journal club is held monthly on the second Tuesday mid-day. Residents are protected from service responsibilities to attend these conferences. Additionally, autopsy conference is held for those on the autopsy service, a weekly nephropathology conference presents interesting cases which residents are welcome to attend, and there are approximately 10 weekly multidisciplinary tumor conferences which residents attend when on related services. Residents gain experience presenting at these tumor conferences throughout their residency, particularly during the 6 weeks they are on the conference/consult rotation during their PGY3 and 4 years in surgical pathology.

Q: Does the residency have a "bootcamp" for new PGY1 residents?  
A: We don't have a boot camp per se, but we have a robust orientation lasting 3-5 days when PGY1 Residents start, and the didactic conferences during the month of July are all orientation lectures to the different disciplines in pathology. These include a series of organ
system based lectures on the approach to handling all specimen types presented by the upper-level residents, and lectures by faculty orienting new residents to all of the laboratories. New residents are carefully supervised and instructed when they start a new rotation, and chief residents and faculty are always available to assist a new resident.

Q: How much call do residents take?
A: PGY1 residents do not take call. PGY 2-4 residents divide up call time, approximately 13 weeks total over the duration of the residency. Call is combined AP and CP for everything but the autopsy service. Call is from home, with residents returning to the hospital as needed for patient care issues. PGY1s and 2 do Saturday autopsies when they are on the autopsy rotation, but there is no night or Sunday autopsy call.

Q: What opportunities are there for teaching?
A: Residents participate in small group teaching for pre-clinical medical students, working one-on-one with MS4 medical students doing electives in pathology, presenting at clinical pathology conferences and lab continuing education conferences, and at multidisciplinary tumor boards.

Q: What fellowships does UNC Department of Pathology sponsor?
A: Cytopathology (2), Surgical Pathology (2), Hematopathology (1 or 2), Forensic Pathology (1 or 2), Nephropathology (1), Blood Banking/Transfusion Medicine (1), Molecular Genetic Pathology (1), Clinical Chemistry (1), Clinical Immunology (1), Laboratory Genetics and Genomics (1), and Clinical Microbiology (1). UNC residents are typically very competitive for these fellowships and are encouraged to apply.

Q: What fellowships have recent graduates done and how many of your graduates have done fellowships at UNC?
A: In the last 10 years, 39 residents have completed the program. 2 went on to other disciplines in medicine (dermatology resident, urology attending) without doing pathology fellowships. The remaining 37 did or are doing pathology fellowships. These residents completed or will complete a total of 55 fellowships (surgical pathology–11, cytopathology–11, hematopathology–7, molecular pathology–6, forensic pathology–5, dermatopathology–3, GI pathology–2, GU pathology–1, transfusion medicine–2, gyn pathology–1, breast pathology–2, renal pathology–2, bone and soft tissue pathology–1). 21 of these residents did 1 fellowship, 14 did 2 fellowships, 2 did 3 fellowships. 38 of these fellowships were done or will be done at UNC, 15 were not at UNC (outside institutions include Johns Hopkins Hospital (3), Memorial Sloan Kettering (2), Cleveland Clinic (2), University of Michigan (1), Hospital of the University of Pennsylvania (1), Duke (1), Cornell Weill (1), Yale University (1), University of California at San Francisco (1), Stanford University (1), Pittsburgh (1). Our residents have been very successful at competing for outside fellowships if they so choose.

Q: What positions have your recent graduates taken after completing training?
A: Of the 39 residents who have completed the program in the last 10 years:
• 17 academic positions (tenure track, clinical track, and VA faculty appointments) (8 at UNC, 2 at Duke, and 1 each at the Mayo Clinic, Stanford University, Wake Forest University, Memorial Sloan Kettering Cancer Center, University of Pennsylvania, Thomas Jefferson University, and Georgia Regents University)
• 11 private practice
• 1 industry (molecular pathology company)
• 3 Medical Examiner in North Carolina
• 1 US military
• 6 still in fellowship training

Q: Where can I find information on salary and benefits?
A: The salary and benefits web page for all housestaff lists current salary benefits. These are updated yearly. In addition, the Department of Pathology and Laboratory Medicine gives each resident a professional fund for books, journals and travel of $1000/year, an extra $500/year for chief residents, and will pay meeting registration and travel for residents to present at professional meetings (in addition to the professional fund for each resident).