

Pathology: Applying Science to Diagnostics in Medicine



- Laboratory and tissue-based diagnostics spanning across fields of Medicine and Science
 - Cutting edge scientific applications (e.g. next generation sequencing-based cancer genomics, others)
- **Anatomic Pathology (AP):** Tissue- and cell-based diagnostics for cancer and other diseases (subspecialties e.g. GI, GU, GYN, Neuro, others)
- **Clinical Pathology (CP):** Molecular/Genetic/Genomic Pathology, Microbiology, Chemistry, Immunology, HLA/Transplant, Hematopathology, Transfusion Medicine/Blood Banking
- Use of clinical laboratory approaches synergizes with physician-scientist career goals.
 - Enables engagement with research on disease mechanisms with translation to therapeutics.
 - Aided by roles in biobanking and tissue-based research that engage collaborations with other researchers.
- More information on ICPI website: <https://pathologytraining.org/a-career-in-medicine/>

Pathology: Training Pathways and Research Track



- **Residency:** American Board of Pathology (ABP)-certified training pathways:
 - AP/CP: 4 years
 - AP only or CP only: 3 years
 - AP/NP: 4 years
- **Fellowships:**
 - In many AP/CP subspecialties, generally 1 year clinical, research years may be added
- **Research Track:**
 - Core residency tracks above include up to 6 months research
 - ABP research track adds additional year of research within residency (*Weiss & Johnson, 2016, Acad Pathol; Remick et al 2016, Acad Pathol*)
 - Additional years of fellowship research may be added
- **Most research track trainees do AP only or CP only with a fellowship**, resulting in 3.5 years clinical training and several years of research training

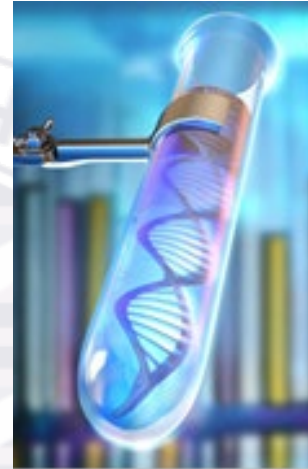
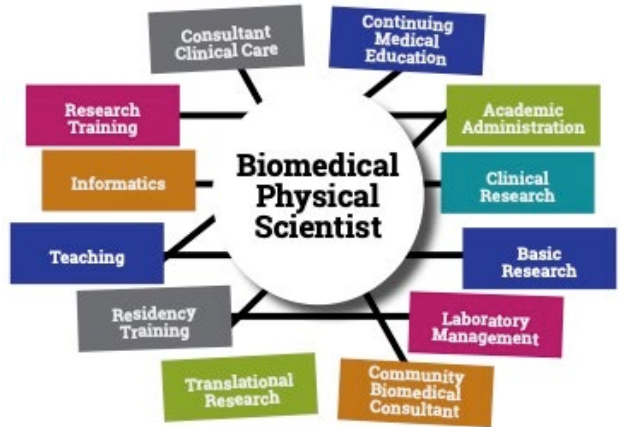
Pathology: Pursuing Research Careers Approaches and Outcomes



- **Residency Application**
 - Programs usually have separate match listings for AP/CP, AP only, CP only, AP/NP with research track selected as follows:
 - List separate research track slots in the match.
 - Match through AP or CP and commit that all residents can enter research track.
 - Match through AP or CP with advance notification of selected applicants of a commitment for research track if they choose that program.
- **Flexibility** allows individual programs to develop different approaches for training sequences and application protocols.
 - Most trainees do a large research block after residency or after fellowship.
- **Strong Outcomes for Research Careers**
 - Many trainees obtain NIH K08 or other NIH awards during training, publish extensively.
 - Outcomes studies show Pathology in top 1-3 positions among medical fields for MD-PhD graduates remaining in academia or remaining active in research (e.g. Brass et al 2010, Acad Med, national survey; Andriole et al 2020, Acad Med, AAMC database).

Questions?

The Many Interests of the Biomedical Physician Scientist



Resources:

Pathology: A Career in Medicine. Intersociety Council for Pathology Information (ICPI).

<https://pathologytraining.org/a-career-in-medicine/>

The Road to Becoming a Biomedical Physician-Scientist in Pathology and Laboratory Medicine. Gottlieb, 2017. American Society for Investigative Pathology, Committee for Career Development and Diversity.

<https://www.asip.org/ASIP/assets/file/careers/TheRoad.pdf>