

ASPHO Career Path Spotlight

Harry Layton Lesmana, MD

Board certifications: American Board of Pediatrics, American Board of Medical Genetics and Genomics

Career Description

- Current position: Assistant Professor, Cleveland Clinic Lerner College of Medicine (CCLCM), Case Western Reserve University (CWRU)
- 2. Institution: Cleveland Clinic
- 3. Years at institution: 4 years
- 4. Did you complete additional post-fellowship training? Was it an important factor in your current position? No additional training post-fellowship
- 5. Years out of Fellowship: 4 years
- 6. Type of institution: (Academic center, clinical center, private practice, Research facility, Industry, Non-profit): Academic center
- 7. Approximate number of attendings in your PHO department/division: 19
- 8. How do you allocate your effort? (*Please provide a % for each area):
 Clinical: 80%, Scholarship/Administration: 20%, Education/Teaching: no dedicated FTE
- 9. Position Specifics (Please give a brief description of your current responsibilities in these areas)
 - a. Clinical activity: I am dual appointed in the Division of Pediatric Hematology, Oncology and HSCT (under Department of Pediatrics) and the Department of Medical Genetics and Genomics
 - *i.* Outpatient: cancer genetics (cancer predisposition clinic), bone marrow failure clinic, immunohematology clinic
 - *ii.* Inpatient: attend inpatient service in Pediatric H/O (4 weeks/year), also attend inpatient consult service for Genetics (6-8 weeks/year)
 - b. Scholarship/Research: 1) I run pediatric cancer predisposition registry and biorepository at Cleveland Clinic where I focus on discovery and characterization of novel cancer predisposition syndromes, 2) I serve as site principal investigator for several consortiums and industry-sponsored studies
 - c. Education/Teaching: 1) member of Scholarly Oversight Committee for Pediatric H/O fellows, 2) give lectures twice a year at Pediatric H/O Fellow Lecture Series, 3) give seminar once a year for Graduate Students in Molecular Medicine PhD Program, CCLCM, 4) direct elective rotation in Pediatric Cancer Genomics for Pediatric H/O fellows
 - d. Administration: Director of Pediatric Cancer Predisposition Program, Cleveland Clinic
 - e. Other: Not applicable.





ASPHO Career Path Spotlight

Career Perspectives

1. What were important factors in your taking on this role (e.g., professional interest, family, geography, spousal profession)? What made this career path appealing?

I was drawn to this role by my passion for integrating genomics into pediatric hematology and oncology care, particularly in the areas of cancer predisposition, bone marrow failure syndromes and inborn error of immunity. I've always been motivated by the opportunity to bring precision medicine to children and families affected by complex genetic disorders. Cleveland Clinic offers a unique environment to build multidisciplinary programs that bridge pediatrics and adult care, aligning perfectly with my vision for a lifespan program. Geographic and institutional factors also played a role — the Clinic's collaborative culture and strong emphasis on innovation made it the ideal setting for program development and research in this evolving field.

2. Is there specific training or experience that helped you obtain this position?

My career path has been shaped by a combination of clinical genetics and pediatric hematology/oncology training. I completed a combined pediatrics and medical genetics residency at Cincinnati Children's Hospital, followed by a fellowship in pediatric hematology/oncology at St. Jude Children's Research Hospital, where I developed a deep interest in cancer predisposition syndromes and inherited bone marrow failure syndromes. The ability to integrate these disciplines — understanding both the molecular underpinnings of disease and their clinical implications — positioned me well for a career focused on genetics-informed care models in hematology and oncology.

3. Is this career path what you expected? Please explain.

In many ways, yes — though the field has evolved faster than I could have imagined. I anticipated that genetics would increasingly inform hematology/oncology practice, but I didn't fully appreciate how quickly genomic testing, bioinformatics, and multidisciplinary collaboration would redefine the clinical landscape. What has surprised me most is the breadth of opportunities for program-building and implementation science — areas that allow me to directly shape how genetic knowledge is translated into clinical workflows and patient outcomes.

4. What do you find most rewarding about your current professional role?

The most rewarding aspect is helping families find clarity and direction through complex genetic diagnoses — particularly when identifying a germline finding that not only explains a child's presentation but also guides surveillance, treatment, and family counseling. I also deeply value the opportunity to mentor trainees and build new clinical programs that bridge traditional specialty boundaries. Seeing those programs grow and witnessing their impact on patients and care delivery is immensely fulfilling.



ASPHO Career Path Spotlight

5. What do you find most challenging about your current professional role?

The greatest challenge lies in integrating precision medicine into existing healthcare systems, where logistical, financial, and educational barriers can limit access to genetic evaluation. Additionally, balancing clinical responsibilities, program development, and research within the constraints of time and resources requires ongoing prioritization. However, these challenges also drive creativity and collaboration — they are precisely what make this work meaningful and dynamic.

6. What do you see yourself doing in 5 years and 10 years?

In 5 years, I hope to see our Lifespan Bone Marrow Failure and Cancer Predisposition Program fully established as a national model for integrated pediatric—adult care. I envision expanding our implementation research portfolio, studying how genetic information can be effectively incorporated into real-world oncology and hematology practice.

In 10 years, I aspire to be leading a comprehensive center for hereditary hematologic and oncologic disorders, where clinical care, translational research, and education intersect — fostering the next generation of clinicians and scientists who will continue to push the boundaries of genetics-informed medicine.